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INTERRELATIONSHIPS AMONG PROPOSITIONAL
LOGIC, SOCIAL PERSPECTIVE-TAKING, MORAL
STAGE AND DELINQUENT I-LEVEL CLASSIFICATION

by



Randall John Robert Krausher

A THESIS

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The undersigned certify that they have read,
and recommend to the Faculty of Graduate Studies and
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INTERRELATIONSHIPS AMONG PROPOSITIONAL
LOGIC, SOCIAL PERSPECTIVE-TAKING, MORAL
STAGE AND DELINQUENT I-LEVEL CLASSIFICATION

submitted by RANDALL JOHN ROBERT KRAUSHER
in partial fulfilment of the requirements for the degree
of Doctor of Philosophy in Educational Psychology.

ABSTRACT

The purpose of this study was to examine Interpersonal Maturity Level theory and classification of delinquent types within the context of the structural-developmental theories of Piaget, Kohlberg and Selman. In accord with descriptions of I-level types, it was hypothesized that delinquent offenders identified at differing levels of Interpersonal Maturity would also differ in the extent to which they exhibited formal cognitive operations, a differentiated and reciprocal role-taking ability and advanced (conventional and post-conventional) moral judgement development.

Subjects included 156 institutionalized male and female delinquent offenders and 158 male and female non-delinquents all ranging in age from 10 to 16 years. Formal cognitive operational thought was assessed through completion of a test battery comprised of propositional and proportionality items adapted from Lunzer. Moral judgement development was determined by Rest's Defining Issues Test and reciprocal role-taking ability based upon Selman's level hierarchy. I-level classification was made through application of Jesness' Sequential I-level classification methodology.

Results indicated that, for the delinquents, all hypotheses were confirmed. Three I-level designations were derived and each group was found to differ significantly on each of the principal developmental measures. I-2's exhibited minimal formal operational thought, predominantly preconventional moral reasoning and an egocentric, non-reciprocal role-taking ability, while the I-4's appeared most developmentally advanced in each of these dimensions.

For the non-delinquent group, only two I-level classes were

identified: I-3's and I-4's. Despite differing I-level designations, the non-delinquents appeared relatively homogeneous as they did not differ significantly on any of the principal developmental measures under examination.

An empirical computer-assisted program to identify dissimulating respondents was detailed, which had been utilized to purge the total initial sample of invalid data information sets prior to final analyses.

The findings of the study were discussed in terms of the implications for refining treatment programming strategies in institutional care and of the importance of adopting a developmental frame of reference in formulating therapeutic activities with adolescent offenders.

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CHAPTER I

Introduction

Background to the study

One of few facts usually agreed upon in the field of delinquency is that adolescent delinquents are not all alike. They appear to differ from one another not only in the form of their offenses but also in the reasons for their conduct and in the meaning of their crimes. Some are believed to indulge in delinquent and criminal activities due to the influence of their peers--upon whom they depend for approval. Some adolescent groups, participant in a deviant subculture which has internalized antisocial values, demand petty criminal behaviour of group members as the price of acceptance. Other adolescents would appear to become delinquent and to break laws due to an insufficient socialization, which leaves them vulnerable to many untoward influences in their society. For still others, delinquent conduct is interpreted as an acting-out of internal conflicts, identity struggles and family crises.

Recently an increased interest in typologies and classification systems of delinquency has been evident. Typologies have most commonly been justified as (a) aids in understanding the phenomenon of delinquency, or (b) as aids in conceptualizing delinquents for research investigations, or (c) as aids to practitioners in treatment programming and case management of delinquents (Warren, 1971).

That the effective treatment of delinquent offenders has been modest,

at best, is well known (Greenberg, 1977; Lipton, Martinson & Wilks, 1975). A continuing problem in the identification and establishment of effective treatment programs for delinquent populations has seemingly led to a proliferation of typologies. These have come not only from psychologists and sociologists in the social sciences, but from psychiatrists, neurologists and geneticists in the medical sciences as well. Several delinquency theorists have attempted to synthesize these many typologies in order to promote parsimony in the field (Ferdinand, 1966; Glueck & Glueck, 1970; Gottfredson, 1973; Kinch, 1962; Warren, 1971) and have developed "metatypologies" proffered to superordinate the many, often duplicative, classification systems.

Warren (1971) for example, has grouped offender classifications into five broad areas:

1. There are those which are principally predictive in nature and may be referred to as classifications for management. Examples of these would include the British Borstal prediction studies (Mannheim and Wilkins, 1955; Stratta, 1970) the California Department of Corrections' Base Expectancy Tables (Beverly, 1959; Gottfredson, Ballard & Lane, 1963; Gottfredson & Beverly, 1962) the Gluecks' Social Prediction Tables (Glueck & Glueck, 1959; Glueck, 1962) and the configuration analyses procedures as represented by Glaser (1962, 1964) and Babst, Gottfredson & Ballard (1968).

2. A second main group are termed reference group typologies and are represented in works by Gibbons (1965), Schrag (1961), Sykes (1958) and in the social class typology proposed by Miller (1958).

3. There are the behavioural classifications which characterize many of the sociological theorists' offerings: Cloward & Ohlin (1960), McCord, McCord and Zola (1959), Reckless (1961) and Roebuck (1967).

4. A very sizable group includes those psychiatrically oriented typologies as represented in the works of Aichhorn (1935), Argyle (1961), Ferdinand (1966), Frankenstein (1970), Friedlander (1947), Hewitt and Jenkins (1944), Jenkins & Boyer (1968), Makkay (1960), Fritz Redl (1956), and Reiss (1952).

5. Last, there are those social-perception and interaction classifications, termed phenomeno-psychological, which are represented in systems proposed by Hunt and Hardt (1965), MacGregor (1971), Peterson, Quay & Cameron (1959), Quay (1965), Russon (1962), Sullivan, Grant & Grant (1957) and Warren (1966).

Rationale for the Study

Of the many typological systems which have appeared, few have generated much interest on the part of criminologists; fewer still have been empirically validated. Some theorists, particularly Gibbons (1975), have become disillusioned with such intellectual pursuits in criminologic research. Despite this, however, there have been some important advances in the application of typologies to the management and treatment of institutionalized delinquent offenders. The Interpersonal Maturity Level Classification System (Warren, 1966) has been shown to be a viable methodology for differentiating between incarcerated juvenile offenders on the basis of their unique modes of social perception, comprehension and awareness of both self and others.

Loosely based upon a socio-cognitive, developmental model, the classification system has been utilized most extensively and successfully in California. Within the past decade research studies have been conducted expanding its construct validity (Appendix A). Anticipated relationships have been empirically confirmed as seen in extant literature detailing

the relation of Interpersonal Maturity Level theory and classification to psychological correlates such as empathy level, intelligence, future-time perspective, impulsivity-reflectivity, locus of control, psychological differentiation, cognitive complexity, affect awareness, extraversion, neuroticism, and ego development (Jesness, 1974; Appendix A).

That the Interpersonal Maturity Level System (I-level) has been a useful program, successfully implemented in California juvenile treatment centres is evident in research studies sponsored by the California Youth Authority (Jesness 1971a, 1971b, 1975a, 1975b). Intervention strategies based upon I-level theory have undergone considerable refinement. Differential treatment has included establishing separate living quarters for different I-level types, matching of offenders with case-workers based upon interpersonal characteristics of "treaters" deemed to best promote therapeutic response with certain delinquent I-level types, and using I-level strategies with offenders on probation and with those living within group-home settings. Differential response has also been reported to programs such as Behaviour Modification and Transactional Analysis. It may be said however that I-level has proven most successful in the treatment of incarcerated offenders (Beker & Heyman, 1972; Gibbons, 1970; Jesness, 1975b; Lerman, 1975; Palmer, 1976).

Noting the developmental context of Interpersonal Maturity level theory, an interest may be expressed in clarifying the relationship of I-level to analogous socio-cognitive constructs such as moral reasoning, role-taking, and cognitive growth and conceptual development. It is known that considerable research activity has been conducted investigating the interrelationships among these constructs (Kohlberg, 1976 et passim; Selman, 1976 et passim). Moreover, a wealth of research is now available

which has compared delinquents with matched non-delinquent controls in cognitive, moral and social domains. Generally, the research shows that delinquent groups usually display developmental delays or retarded growth--specifically, that their test performance is not characterized by age-appropriate logical thinking, moral judgement or capacity for reciprocal role-taking. Consequently a variety of studies have attempted to experimentally stimulate and promote advances in cognition, moralization and role-taking in both delinquent and non-delinquent groups. Results have been encouraging but not consistently successful (Chandler, 1973; Ewanyk, 1973; Kohlberg, Kauffman, Scharf & Hickey, 1975; Tomlinson-Keasey, 1972; Tracy & Cross, 1973; Walker & Richards, 1979).

Given that no research has yet been conducted and reported detailing the empirical relationship between I-level theory and classification and Kohlberg's moral development levels, to Piaget's cognitive development model or to Selman's role-taking model, despite the strong overlap suggested with each of these constructs, this study has set as its purpose to further explore the construct validity of I-level theory and classification within these logical and socio-cognitive spheres.

Role-taking and moral and cognitive development. Each of these constructs are held to be closely interrelated, for, within the cognitive-developmental model, it is seen that the progression away from egocentric thinking (decentration) is accompanied by synchronous progression in both the social and moral domains. Such correspondence conforms to the principle of structural parallelism which Piaget termed structure d'ensemble. This progression however is not strictly isomorphic. There is the recognition of a horizontal décalage which implies that cognitive growth precedes the advancement of a more articulated socio-moral reasoning. While the

qualitative changes in logical thinking, reflective of formal operations, are considered to occur around the ages of 11 to 12, the appearance of, for example, conventional moral reasoning is noted at approximately 12 - 13 years of age (Colby, 1973; Colby & Kohlberg, 1975; Fritz, 1974; Kuhn, Langer, Kohlberg & Haan, 1977). Décalage is also noted in the adoption of a more differentiated (reciprocal) social perspective-taking ability (Chandler, 1973; Selman, 1976; Selman & Byrne, 1974).

Confirmation of the relation between cognitive developmental constructs is readily apparent in the volume of research currently being conducted and reported in the literature (Chandler, 1971, 1972, 1973, 1978; Colby, 1973, Fritz, 1974; Jurkovic, 1976; Jurkovic & Prentice, 1974, 1977; Keasey, 1971, 1973, 1975; Kuhn, Langer, Kohlberg & Haan, 1977; Lee, 1971; Selman, 1971, 1975, 1976; Selman & Byrne, 1974; Stuart, 1967; Tomlinson-Keasey & Keasey, 1972, 1974; Walker & Richards, 1979), where it has been shown empirically, that the development of levels of moral judgment and reasoning and of levels of social perspective-taking are dependent upon and subjected to the constraints in corresponding level of cognitive maturation. In this context, Kohlberg (1976) for example, has proposed that the progression to Conventional moral reasoning (based upon his model) is contingent upon the advancement to Formal cognitive Operations (based upon the Piagetian model). While he does not indicate this advance in cognitive growth to be a sufficient condition for moral progression, he does cite it as a necessary one. Similarly, Selman (1976), who redefined Flavell's (1968) social perspective-taking model into a five-level role-taking system, supports the view that cognitive growth precedes the development of a more differentiated role-taking ability, while a decentered social perspective is an important precursor of advanced moral reasoning.

Direction of growth. In the normal course of ontogenetic growth and development, it is held that the individual organism progresses from an autistic egocentric mode of reasoning about the self, the world and of the individual's role within that world to a more differentiated and ethnocentric mode of functioning which permits interaction in a much more sophisticated form. Piaget maintains that at the approximate age of 11 to 12 years, a growing child begins to move from a level of Concrete mental Operations in logical thinking to Formal cognitive Operations where the capacity to think in new, abstract and non-tangible ways, to formulate hypotheses and to reason in a much more scientific and systematic manner appears. This capacity, which further illustrates the Piagetian principle of decentration, or continuing de-emphasis of the egocentric perspective, is marked by the coordination of reversibilities and involves the capacity to view a problem from several vantage points and to inter-relate these. During the period of Concrete Operations (7 to 11 years) a child does not separate properties from his own actions and, as a result, moral judgements focus less on physical aspects and are more likely to examine moral dilemmas in terms of other peoples' reactions or personal desires. Not until the period of Formal Operations is the individual logically capable of the reversibility and flexibility necessary to use thought processes to coordinate facts and generate hypotheses. Logical operations at this stage are characterized by a consideration of all the possibilities and this consideration when applied to the moral domain is reflected in a reluctance to accept the moral norm as the only or most reasonable possibility. In the progression from Pre-Conventional to Conventional levels of moral maturity, it is recognized for the first time that others have perspectives which must also be considered,

and it is this recognition which has become a defining characteristic of morality at the Conventional level (Kohlberg, 1976).

With respect to role-taking, prosocial behaviour is linked to the development of age-appropriate perspective-taking skills. It has been demonstrated that a variety of forms of social deviancy are associated with persistent egocentric thought (Kohlberg, 1958). Persons displaying developmental delays in the acquisition of these skills have been shown to systematically misread societal expectations, to misinterpret the actions and intentions of others and to act in ways which are judged to be callous and disrespectful of the rights and privileges of others (Chandler, 1973).

That progression in both levels of moral reasoning and in the capacity to consider the perspective of others results in a decrement in antisocial conduct with identified offenders is illustrated, for example, in the work of Kohlberg, Kauffman, Scharf & Hickey (1975); Chandler (1973, et passim) and Jurkovic & Prentice (1974, 1977).

Definition of terms

Delinquent. For the purpose of this study, a delinquent is defined as any individual, male or female, between the ages of 10 and 16 years who is currently participating in a treatment program offered by a provincial juvenile detention institution (which provides service to behaviourally disturbed youths) following referral by either the Juvenile Court or the provincial department of social welfare.

Interpersonal Maturity Level. Interpersonal Maturity Level, or "I-level" refers to a theory and companion classification system which seeks to differentiate among types or kinds of delinquents based upon a multi-dimensional socio-perceptual, developmental scheme. This theory was originally proposed by Sullivan, Grant & Grant (1957) and the classi-

fication system developed by Warren (1966); later by Jesness (1974).

Social Perspective (role) taking. Originally proposed by Flavell et al (1968), role-taking involves the ability of an individual to adopt or to assume the perceptual impact of a given event or condition upon an individual separate, but not necessarily removed, from himself. Selman (1976) and Selman & Byrne (1974) have clarified this and defined levels of social perspective-taking.

Moral development level. For the purpose of this study, moral development level is designated as the specific qualitative nature in which an adolescent reasons about a given moral event, in accordance with Kohlberg's theory, and as measured by Rest's (1979b) Defining Issues Test.

Cognitive development. Level of cognitive development, in this study, refers to the degree to which formal operations, based upon Piaget's theory of intellectual growth are utilized by sample subjects. Tasks based upon Piaget's earliest formulations (1928) of the Formal Operational level and adapted from Brainerd (1978), Gallagher (1978), and Lunzer (1965, 1978) involving propositional logic and hypothetico-deductive reasoning will be used in this assessment.

Significance of the study

Previous research studies have examined the relation of delinquent Interpersonal Maturity Levels to a selection of psychological (intellectual, information-processing, personality) and sociological variables. Sullivan, Grant & Grant (1957) and Warren (1966) have characterized I-levels within an ontogenetic sequence not unlike the developmental frame of cognitive-structuralists. Descriptions which Sullivan et al drafted in the explication of I-level phenotypes regarding their conceptual abilities, social awareness, capacity for information processing and abstraction and manipu-

lation of social symbols seemingly corresponds to the developmental sequences as proposed by Piaget, Kohlberg and Selman in logical, moral and social domains.

Evidently some researchers have been successful in experimentally inducing progression in both cognitive functioning and socio-moral reasoning (Brainerd, 1971; Brainerd & Allen, 1971; Kohlberg et al, 1975; Tomlinson-Keasey, 1972; Waller & Richards, 1979). Further, a variety of theorists maintain that individuals possessing higher levels of logical thinking, but who are delayed in lower socio-moral stages, will respond more readily and make considerably greater gains in socio-moral thought than age-matched controls when exposed to experimental intervention programs. Presumably this intervention diminishes the décalage in cognitive, moral and social realms (Arbuthnot, 1975; Blatt, 1970; Keasey, 1973; Kohlberg, 1976; Tracy & Cross, 1973).

The investigation of delinquent I-levels within the context of structural-developmentalism would not only allow for the meaningful differentiation among institutionalized offenders upon the basis of interpersonal perceptions and awareness, but should socio-cognitive functioning be shown to be systematically related to I-levels, this could permit further refinement and extension of differential treatment programming strategies taking into active consideration subjects' unique modes of logical and moral understanding, reasoning and comprehension.

CHAPTER II

Review of Related Literature

Typologies of Delinquency

A survey of the published literature of major theorists in juvenile delinquency reveals that there has been an intense interest, especially within the period following the Second World War, into delinquency research and specifically into the development and elaboration of offender classification schemes and taxonomies (Gibbons, 1975). In this chapter these have been grouped into eight major categories and include those which are of historical interest dating back one hundred years; those basing their schemes upon the actual conduct patterns of offenders; those utilizing predictive systems for identifying potential delinquents or recidivists; those focussing upon the constitutional natures or temperaments of delinquents; upon physiological, biological or neurological characteristics and anomalies; upon intrapsychic variables, here termed "phenomeno-psychological"; or upon more familiar psychiatric-pathological theories; lastly, upon sociological considerations.

A selection of typologies from these categories is offered for descriptive purposes. These descriptions however may not be considered definitive in either an intensive or extensive sense, for a full accounting of typologies in print approaches 100.

A preliminary overview. Ferdinand (1966) has had an important impact upon the nature of theoretical developments in the field of juvenile crime. While his own theory and typology of juvenile delinquency is an admixture of psychiatry (Jungian theory) and sociology, later theorists utilize his work and his writings as a reference point in identifying their own positions.

In his introduction to a major work in delinquency typology, Ferdinand states:

Perhaps no other issue since the birth of the behavioural sciences has provoked more contentious debate than that concerning the causes of delinquency and crime. Currently the battle lines are drawn broadly between (1) those who insist that delinquency in both substance and cause is basically social and therefore, not amenable to psychological or physiological explanation and (2) those who maintain that delinquency is in the last analysis an empirical problem and that any factor--whether social, psychological, or physiological--can be utilized in explaining delinquency as long as it is demonstrably related to the problem. (Ferdinand, 1966, p. 3)

Ferdinand has termed the former group to be "Purists" and the latter to be "Empiricists". In reviewing the extant literature in criminal typology, Ferdinand chose to classify their efforts into four groups: those typologies based upon legal categories; typologies drawn from psychoanalytic theory; typologies based upon sociological theory and physiological factors; and typologies "derived impressionistically from empirical data".

Ferdinand considers several criteria to be essential in the development of useful typologies. First, he emphasizes that typologies must be distinguished from theories. He asserts that the basic function of a theory "is to identify the essential forces in nature and to conceptualize them so that the implications they contain for each other and for concrete events can be unequivocally determined" (p. 45). Typologies are based upon types which describe complex and empirical associations. Their orientation is to the empirical world, while the orientation of theory is to the analytic simplicity of the conceptual world. A fundamental difference then is that the concern for typologies is, and should be, the uniformities in nature; for theories, it is the logical relationships that exist between concepts. He defines a

typology as "a collection of types that catalogues the various ways in which a given complex of characteristics can be arranged to explain the behaviour of acting units, or individuals", (p. 44). Typologies consist, essentially, of collections of types that are clearly distinguishable from one another but are sufficiently similar to form a set. They group together things that have something intrinsically in common so that genotypically, the members of a type are all one and their commonality derives from the fact that they all conform to the same scientific laws. A last criterion is that typologies should be concerned with the characteristics that are displayed by acting units or individuals not with the relationships among "disembodied processes or variables".

Ferdinand is best known for his three-fold classification of typologies: the Ideal, the Empirical and the Synthetic.

The Empirical typologies focus simply upon the actual behaviour without any necessary consideration of either antecedent or consequential events:

Empirical typologies may make some use of theoretical insights but in a primitive and even subliminal way. Their principal function is that of charting the actual patterns displayed by specific kinds of individuals. They provide new material as it were, out of which theories are constructed or perfected...Empirical typologies fall into an easily identified pattern. They are not exhaustive in either an extensive or intensive sense, and they are forced by their very nature to deal with highly concrete kinds of observations. (1966, pp. 48 - 50)

The Ideal typologies' most important feature is the manner in which they have been formulated. They are defined in terms of the implications that a particular theory contains for a specific pattern of behaviour and they can advance sound arguments to explain why a given individual acts

as he does. Ideal typologies are analytically distinct and mutually exclusive. They must be described in terms of characteristics uniformly at the same level of analysis and they should exhaust the full range of patterns that are possible at their level.

The Synthetic Typologies:

...serve mainly to coordinate the implications that each ideal typology contains for a given behavioural pattern so that a comprehensive, coherent explanation of the pattern can emerge. Thus, assuming that delinquency is influenced both by psychological and social forces, a synthetic typology of delinquency would describe the behaviour of individuals with typical personality styles in typical social situations. By examining systematically the personality types that psychological theory suggests in terms of certain common social situations, it should be possible to construct a synthetic typology that coordinates the insights of both points of view in the explanation of delinquency. (Ferdinand, 1966, p. 55)

Historical typologies

Physiognomy. The work of J. Baptiste della Porte (1536 - 1615) is most representative of this early approach. Rather than a causal theory, della Porte's approach was a methodology of predicting individual criminality. It is reported that during his school years, he became aware that personality was related in a consistent manner to facial features. Comparing the facial features of "ordinary men" with those of dead criminals, della Porte concluded that their basic physical features were, in fact, quite different. He claimed that thieves, for example, could be identified by reference to their "little ears, bushy eyebrows, small noses, thin lips, shifty eyes, and long fingers". Because these traits were inborn and associated with criminality, della Porte held that it was impossible to change or reform criminals.

Phrenology. Franz Gall (1758 - 1828) opted for an examination of

the physical topography of the skull. His belief was that the mind controlled the body claiming that different types of minds were contained in differently shaped skulls. Studies of the shape and size of skulls of criminals seemed to provide evidence for this belief. Different bumps and irregularities in skull shape were thought to be intimately associated with different types of criminal acts. Basically, Gall's theory held that the skull took on the shape of the brain and that different areas of the brain, controlled distinct faculties or functions. By examining the shape of the skull a trained observer could spot which areas--and thus faculties--were overdeveloped or underdeveloped. Gall's cranioscopy enabled him to "map" the skull into 27 distinct areas which provided cues about the individual's behavioural tendencies.

The school of criminal biology. Césaire Lombroso (1836 - 1909), an Italian physician, criminologist, and founder of the Positive School of Criminology, attempted to apply Charles Darwin's theory of evolution to the criminal. It was held that the criminal behaved as he did because he had been born with a certain "biological constitution" or "predisposition" to commit criminal offenses. Certain physical deviations and other anomalies which were obtained through anthropometric measurement revealed the criminal to be a primitive, "atavistic" type of human being. His investigations included the measurement of the skull and other organs, examined in both living and recently deceased humans. On living humans, measurements were taken regarding blood pressure, emotional reactions, hearing, taste, smell and handwriting. He then divided all criminals into the following types: the born criminal; the epileptic criminal; the criminal of irresistible passion; the insane and the feebleminded criminal

(which included those of borderline mental ability); and the occasional criminal (which was subclassified into the "pseudocriminal"; the "criminaloid" and the "persistent offender of the non-abnormal type") (Griffin & Griffin, 1978).

Roebuck (1967) states that although Lombroso's theory has not prospered, the science of criminology is indebted to Lombroso for many reasons. He recognized the inadequacy of the methods then utilized in discovering causes of criminal conduct and was among the first to focus attention of the individual criminal. He made the first attempt to establish a scientific criminal psychopathology and more contemporary endocrinological and biological typology studies reflect the direct influence of Lombroso. He stressed determinism rather than free will and he made comparisons between the offender types as well as comparisons between criminals and non-criminals. He utilized measurements and statistical methods with anthropological, social and economic data. He made an attempt to classify criminals and he insisted that the personality of the offender be examined. He also described the psychological traits which the criminal manifested, for example: instability, impulsiveness, "meagerly developed affections", vanity, lying, gambling, and lack of restraint (Roebuck, 1967, p. 32).

Enrico Ferri (1856 - 1929), a student of Lombroso's, proposed a classification system comprised of criminals who were: (1) born or instinctive criminals such as alcoholics, syphilitics, subnormals, insane, and neuropathics who suffered a reduced resistance (or, increased susceptibility) to criminal stimuli with a concomitant propensity for crime. Essentially biologically defective organisms, there were persons diseased or "burdened with neuropsychopathic conditions"; or those who were

"passional criminals" (divided into passion involving a prolonged and chronic mental state and emotion, or an explosive and unexpected mental state). (2) There were the occasional criminals who constituted the majority of the lawbreakers, being products of a familial and social milieu which promoted such conduct and stood in opposition to an etiology related to personal or physiological or mental conditions. The habitual criminal, that by acquired habit, was a product of his social environment, specifically by being abandoned by his family, through lack of education, poverty, bad companions, contacts with criminals in prison, etc. The involuntary criminal or the pseudocriminal caused damage, or peril through lack of foresight, imprudence, negligence or disobedience of regulation rather than through malicious intent, (Roebuck, 1967, pp. 32 - 33).

Also associated with the Positive School of Criminology, Raffaele Garrofolo, (1852 - 1934), defined the criminal as a psychological type. He analysed the criminal's personality in relation to his environmental circumstances and the modus operandi. This then led him to devise four groups which, while distinct, still related to one another in that each was characterized by a deficiency in the basic altruistic sentiments of "pity and probity". His classifications included: murders; violent criminals; criminals lacking probity; and lascivious criminals.

More recently, European criminal biologists such as Franz Exner have attempted to differentiate between two broad classes of offenders: the Real Criminal, considered to be a serious, recidivistic offender, and a product of inherited predispositions and the Occasional Petty Offender,-- situational type (inherited predispositions are not altogether

ruled out for this latter type). As a group, criminals are deemed inferior or defective when compared with noncriminals. The differences are of degree rather than of kind (Roebuck, 1967).

A student of Exner, Erwin Frey (1959), a Swiss criminologist, analyzed several series of juvenile delinquent cases from the courts of Basel and from a variety of delinquent institutions throughout Switzerland. He proposed a dichotomy of offenders similar to that of Exner: the Habitual Serious Offender who is seen (and his family) to possess any number of the following: mental disease, defective intelligence, psychopathic personality, alcoholism, or criminality; and the Occasional Offender, situational type, who revealed in his makeup and through his family, considerably fewer of these above noted "defective signs". Frey considered the appearance of deficiencies in the personality of the offender (and in his ancestors) as evidence of biological inheritance of weaknesses predisposing to antisocial and criminal behaviour (Frey, 1959).

Behavioural typologies. The typologies which have been grouped together under this heading share in common a delimited focus upon the behavioural act of the individual offender. As such they make no, or at most, an incidental mention of reasons which may account for behavioural manifestations. Implicit to these classification schemes however is the belief that differentiating these offenders upon the basis of their actual patterns of conduct will reveal a constellation of interrelated variables which may meaningfully differentiate one offender from another.

Roebuck. A typology generated inductively in an institutional setting dealing with 1,155 inmates in the District of Columbia Reformatory, Roebuck's (1967) typology was based upon legal categories of offense

behaviour studied within the framework of criminal careers. Prisoners were sorted into classes on the basis of their total crime record as indicated in official records. Roebuck has commented:

...that individual offenders may be classified on the basis of their criminal careers, criminal pattern categories, including modi operandi, and that thus classified they exhibit psychological and social characteristics common to that category. (1967, p. 24)

He felt that to establish a criminal typology, it must be shown that certain kinds of people in certain situations commit similar kinds of crime. The dimensions of measurement upon which Roebuck chose to differentiate these offenders included: modi operandi; offense pattern; social attributes; attitudes and situational stresses, strains and pressures antedating and following criminal behaviour (Roebuck, 1967).

An important aspect in the development of his taxonomy was a careful consideration of the extent and range of criminal activities and he included in the arrest history typology, the frequency and nature of offenses which were broken down 13 different ways. The rationale for this was that, for example, offenders who rob banks exclusively and repeatedly, are presumed to share personal attributes very different from the "mixed pattern offender", or "petty thief" or "property criminal".

The Mixed-Pattern or "Jack-of-all-trades" offender had a history of three or more arrests in which none of the charges formed a frequency pattern. The Single pattern consisted of offenders having a history of three or more arrests, all of which were for the same charge and these were then subclassed into seven single patterns of: gambling; burglary; sex offenses; fraud; auto theft; forgery or counterfeiting. The Double patterns of larceny-and-burglary, or drunkenness-and-assault required three or more charges for each offense with no other charges recorded.

In similar fashion were listed the Triple pattern of drunkenness-assault-and-larceny and finally the "No pattern" offender. Roebuck then proceeded to articulate his legalistic-behavioural typology of criminal offenders divided into 13 separate classes: The Armed Robber; the Drug Addict; the Numbers Man; the Drinker and Assaulter; the Mixed Pattern Offender; the Confidence Man; and the "Others" which comprised petty offenders including most of the combined and Mixed pattern offenders such as the triple pattern of drunkenness-assault-and-larceny.

Glueck & Glueck (1970), noting that the Roebuck behavioural typology was based upon older adolescents (young adults) and mature adults suggest that it may be of rather limited use with juvenile offenders:

...it is probable that use of the typical criminal vocation as a doorway to the delineation of personal and situational influences which tend to develop one or another specific type of criminal is more likely to be helpful in the case of the confirmed adult offender than among more plastic--and probably more varied--juvenile delinquents. (p. 18)

Daniel Glaser (1972) approached the development of a typology of offenders by identifying ten criminal patterns including such types as: "adolescent recapitulators"; "subcultural assaulters"; "vocational predators"; "crisis-vacillation predators"; and "addicted performers". Although Glaser reportedly drew upon research findings, his approach is mainly speculative in nature. Glaser's typology does not, as Gibbons (1975) suggests, specify in sufficient detail the characteristics of criminal offenders to be reliably applied to actual lawbreakers with any precision.

Violating the dictum of parsimony in typology were the systems of, for example, McCaghy (1967), who researched child molesters and differentiated these offenders into six separate types of child molesters seemingly homogeneous from one another, such as the "high-interaction

molester"; "the incestuous molester"; "the career molester"; and the "spontaneous-aggressive molester". Guttmacher (1962) also indulged in the proliferation of criminal subtypes with his studies of convicted murderers. Guttmacher claimed that there were at least nine different types of murderers. An associate, Neustatter (1957), claimed that there were at least ten conceptually different types of murderers. Both theories are criticized as being anecdotal and lacking in objectivity or clarity.

Clinard and Quinney (1973), two sociologists, listed nine categories of crime, which they defined in terms of the dimensions of the criminal career of the offender (not unlike Roebuck). Dimensions examined included group support for criminal conduct, correspondence between criminal behaviour and legitimate behaviour patterns and societal reaction. Some of their types, for illustrative purposes, were occasional property criminals, conventional criminals and political criminals. Their taxonomy is criticized as being very broad, with particular reference to their classification of political crime, which supposedly may range from political protest to espionage. It is also unclear whether they have chosen to examine the crime itself or the criminal person and his milieu. Gibbons (1975) summarizes their system as "one (seeming) most useful for text-book purposes and (having) little or no applicability to correctional endeavours", (p. 144).

Conklin (1972) listed four types of robbers. Shoham, Guttman and Rahav (1970) devised a mathematically-complex schema for differentiating among offense behaviours and Kinsey (Gebhard et al, 1965) differentiated among types of sex offenders on the basis of the age of the victim/co-participant, whether the act was forced or consensual in nature, and whether the victims were children, minors or adults. The various combinations of these dimensions led to 12 possible types of behaviour.

Sellin and Wolfgang (1964) proposed a classification of delinquent offenses which placed a central importance upon the element of victimiza-
tion as a criterion for establishing the differences between various acts.

Two major classes were identified:

- Class I: (a) bodily injury
(b) property crime
(c) property damage (vandalism)
- Class II: (a) intimidation
(b) property loss
(c) primary victimization (crime against the person)
(d) secondary victimization (offense against a business)
(e) tertiary victimization (curfew violations, disorderly conduct, and other offense against the public order)
(f) mutual victimization (adultery or statutory rape where both participants are victimized)
(g) the absence of victimization (truancy, 'incurrigibility')

Typological classifications based upon the specific offense of the individual offender have not provided theoreticians with much useful data through which further study and research might be conducted. They have been of little utility in formulating theories about crime and the nature of criminals insofar as there are many intervening variables which preclude the separation of discrete criminal types based upon their acts.

Griffin & Griffin (1978), commented that classifying by legal offense to be of little if any use, recognizing that "plea bargaining" occurs with regularity and that a myriad of factors take place within the judicial system modifying and altering the legal, formal charges that might be placed against an individual. There are many unofficially handled cases and undetected violations which are not generally identified or accounted for in the construction of typologies.

Predictive typologies. These, as the term suggests, are developed for the purpose of identifying those individuals who may become delinquent

at some point in future, and those identified delinquents who have a much greater likelihood of recidivism. For this class of typologies, decisions regarding whether an offender is to be "treated" in the community, or in an institutional setting are most rationally made by considering among other things, the offender's risk of parole violation.

One of the earliest systems reported in the literature is the statistical approach as represented by England's Borstal system (Mannheim and Wilkins, 1955). The British Borstal system is a nationwide reformatory system for juvenile offenders and is similar in design and operation as the adult correctional system in that country. This probability approach examines a variety of factors within the offender's environment and assigns weights to them. A resultant score thereupon serves to identify the offender as belonging more to a group of serious, chronic, possibly dangerous offenders likely to recidivate; or to those of a much less serious, deviant persuasion with good prognosis of "recovery".

The Base Expectancy tables as utilized by the State of California Department of Corrections and the California Youth Authority (Beverly, 1959), are statistical methods for differentiating the chronic and seriously disturbed delinquent-offender--requiring incarceration--from those for whom the possibility of community treatment and relatively quick response to therapeutic intervention (if any) appears good.

Gottfredson & Beverly (1962) and Beverly (1959) have been involved in the development of the Base Expectancy system. More recently, computer analysis has permitted the development of increasingly complex multivariate approaches to the estimation of individual susceptibility to recurring criminal conduct.

Reported in the literature are configuration analysis procedures

as represented by the work of Glaser (1962); and Babst et al (1968); association-analysis procedures as employed by Gottfredson, Ballard & Lane (1963); and cluster analysis methods as used by Fildes & Gottfredson (1972).

There has been a considerable amount of research utilizing psychological inventories in the prediction of delinquent behaviour, the identification of that potential in non-delinquents and in the likelihood of recidivism for adjudicated offenders. Carl Jesness, for example, in the development of the Jesness Inventory (Jesness, 1972), utilized a multiple discriminant analysis procedure to derive an ASOCIAL INDEX which has been shown empirically to differentiate the serious, chronic delinquent offender from the non- or petty-offender (based upon personality characteristics). Several studies have suggested that the discriminative power of the ASOCIAL INDEX could be improved (Saunders & Davies, 1976; Shark & Handal, 1977). Methodological problems in some of these studies may have contributed to non-significant results (Jesness, 1977).

Marks, Seeman and Haller (1974) have utilized the MMPI extensively with adolescents, both delinquent and non-delinquent. Through multiple discriminant analysis techniques, they have derived specification equations which allow the actuarial projection of delinquent acting-out behaviours in any population of adolescents based upon their personality profiles. In a recent study in California, Wenk & Halatyn (1974) utilized the MMPI as one component in their analysis of young adult offenders. The specification equation used was based upon the earlier research of Gough, Wenk and Rozytko (1965). The California Psychological Inventory, patterned after the MMPI, has also been used in the same context (Wenk & Halatyn, 1974). Two other personality inventories worthy

of mention in the prediction of delinquency are Cattell's Jr./Sr. High School Personality Questionnaire (HSPQ) (Cattell & Cattell, 1969) and the Sixteen Personality Factors Questionnaire (16PF) (Cattell, Eber & Tatsuoka, 1970). Both of these, through similar statistical methods as noted, have been developed to provide specification equations which may be of use in identifying delinquency potential and ongoing anti-social or violent acting-out tendencies.

There are conflicting reports in the literature as to the absolute value of such statistical methods as applied to the individual case for diagnostic and management purposes. As Wenk & Halatyn (1974) discovered, both of the equations which they utilized (MMPI and CPI) in projecting criminal conduct in young adults (senior teens) actually proved to be of no more accuracy than the a priori knowledge that approximately 60 percent of any given inmate population are likely to recidivate.

Sheldon & Eleanor Glueck (Glueck, 1962) have conducted research into juvenile delinquency for more than four decades. Their investigations of many hundreds of delinquents have involved the examination of many different facets of their lives including at least 111 separate variables, which can be grouped, loosely, under developmental health history; neurological findings; intelligence; basic attitudes toward society and authority; intrapersonal and intrapsychic variables; parent relations; socio-economic conditions; family atmosphere and parental-discipline. Their developmental and longitudinal study of a closely controlled sample of 500 delinquent and 500 non-delinquent boys led them to create a Social Prediction Table based upon only three of these 111 factors. These variables were: the quality of supervision of the boy by his mother (broken down as fair or suitable, or unsuitable); discipline of the boy

by his mother (subdivided into "firm but kindly" or "lax, overstrict or erratic"); and last, rearing by a parental substitute (whether there was a guardian raising the boy--someone other than the biological parent). Delinquency weights, or values, are assigned to each variable and the aggregate score places the individual into a range predictive of delinquency, non-delinquency, or of a 50/50 chance of delinquency. Table 1 illustrates their Social Prediction Table.

Given the wide range of variables that these authors examined, it is indeed remarkable that not only were they able to reduce the total number, for predictive purposes, to only three, but that these three also serve to illustrate the importance of the mother-son relationship in the exhibition or containment of delinquent, anti-social and aggressive behaviours.

TABLE 1

Glueck Social Prediction Table

Predictive Factors	Delinquency Scores
Supervision of Boy by mother:	
Fair or suitable	29.7
Unsuitable	83.2
Discipline of Boy by mother:	
Firm, but kindly	6.1
Lax, overstrict, erratic	73.7
Rearing by Parent Substitute:	
No	38.0
Yes	79.3

Chance of Delinquency (Score Class)	Delinquency Rate	Non-Delinquency Rate
Low Chance: (Less than 75)	6.7%	93.3%
About Even Chance: (75-125)	53.3%	46.7%
High Chance: (125 and over)	78.9%	21.1%

(Glueck, 1962)

Psychiatric/pathological typologies. It is clear that the majority of theoreticians investigating and elucidating types of delinquents have reflected a psychiatric orientation in their work. The volume of psycho-analytic/psychiatric material in print is unsurpassed, the closest rival being the work of adherents to the sociological "camp".

Hewitt and Jenkins. One of the earliest pioneering investigations in the development of classification systems for problem children through statistical and empirical methods was that of Hewitt and Jenkins (1944). These investigators hypothesized that children who demonstrated fundamentally different patterns of behaviour maladjustment could be shown to have experienced different patterns of environmental influences.

Working with a pool of 500 case records of children who had been referred to the Michigan Child Guidance Institute for a variety of behaviour problems, they created ninety-four descriptive phrases about behaviour. Children were then rated with regard to the presence or absence of these statements and traits in each individual case. A refinement of these items led to a final list of 45 descriptive statements deemed to be "theoretically important". These 45 items were then inter-correlated with further analysis focussing on the clusters of interrelated traits within the matrix. According to the authors, a group of traits was judged to form a cluster or syndrome if the traits were intercorrelated above .30 and were "logically consistent with experienced clinical judgement".

Their procedures resulted in the delineation of three main behavioural syndromes. Fifty-two children were classified as "unsocialized aggressive", 70 as "socialized delinquent" and 73 as "overinhibited".

Of the Overinhibited youngster, called Type I, Hewitt and Jenkins commented:

...we see an individual who has an excessive development of the shell of inhibition. As a result of this, the primitive impulses (id) are denied adequate expression. Tension mounts within the personality and strong pressures develop in the struggle between the primitive impulses and the repressive forces (or, superego). This individual is chronically in a state of internal conflict. Here we have the over-inhibited individual likely to react to these internal conflicts by developing terror dreams or anxiety attacks or by developing physical symptoms of illness through conversion hysteria, or to defend himself from them through compulsive rituals....we see the milder over-inhibited symptoms of shyness, seclusiveness, fears, clinging, tics, sleep disturbances, nail biting, and other common evidences of tension and anxiety.... (1944, pp. 84 - 85).

Essentially a picture is drawn of a very neurotic, emotionally disturbed youth. Of their second type, the Unsocialized-Aggressive, Type II youngster, they noted:

Type II represents the opposite of Type I. Type II represents the individual with an inadequate shell of internal inhibitions. As a result the primitive impulses come not only into consciousness but into expression very directly, providing there are no external pressures which check them. Such an individual is unsocialized, aggressive and is continually coming into conflict with others--the authorities and the police--as a result of his freely giving vent to his primitive impulses.... (p. 85)

Finally, of the third type of problem child, they have written:

Type III represents a more nearly normal type of personality structure than either of the foregoing. There is a normal shell of inhibition toward members of an in-group. Toward members of any out-group, there is a deficit in the inhibitions, no sense of obligation and a free expression of the primitive impulses....we see here the pseudosocial boy, the loyal gang member, the good comrade of the delinquent subculture who is socialized--often highly socialized--within a delinquent group but regards the rest of the world as fair prey. (pp. 85-86)

Hewitt and Jenkins detailed the relationships that these several groups of offenders have with their peers, with adults, and in particular with their parents. It was their contention that the parent-child relations differed radically from one type to another. They further contended that different psychotherapeutic practices must be followed for each type if there was to be gained a maximal benefit from such intervention.

More recently, Jenkins & Boyer (1968) have conducted further study into the background factors involved in various types of delinquency. In their investigations of both personality and social factors, they once again concluded that three empirically different delinquent types could be uncovered:

A complete clustering of fairly extensive statistical data on 300 delinquent boys in a training school reveals three essentially uncorrelated clusters of delinquency behaviour, the socialized cooperative delinquent, the unsocialized runaway delinquent, and the unsocialized aggressive delinquent. The cooperative delinquent appears to have the most normal personality, comes from the most normal home situation and his delinquency is associated with (and is presumably a part of) strong peer group influences. The unsocialized runaway delinquent appears to have the most poorly organized personality. This type of delinquency is associated with (and is presumably a product of) parental rejection. The unsocialized aggressive delinquent appears to fall in an intermediate position with respect to both parental rejection and degree of personality organization. His personality is organized about a pattern of attack. No one of the parental entries investigated is closely associated with this pattern. We have some evidence which suggests that this type of behaviour is more prone to develop in a child who experiences a combination of parental rejection, parental overprotection, and parental shielding from the authorities. Such a combination might be expected to give him both hostility and the courage to act on it. (Jenkins & Boyer, 1967, p. 76).

Reiss. Albert Reiss Jr., adopted a psychoanalytic perspective and approached the problem of identification of clinical types of delinquents through examination of case history records (1952). Rather than review these himself, he arranged for psychiatrists and social workers to analyse the information in these records and to classify subjects into one of three classes. Category One was that of the relatively-integrated delinquent who was described as an "adolescent with the relatively integrated personal (superego) controls who in all probability will become a mature adult". The second subtype was labelled the "delinquent with markedly weak ego-controls" who was viewed as having low

self-esteem and manifesting insecurity or as being highly aggressive and hostile. The third category was termed the "delinquent with relatively defective superego controls" and was described as failing to internalize the social controls of middle class society, and as experiencing little guilt over their delinquent acts. Of the more than one hundred comparisons that were made, some significant patterns emerged. Weak ego delinquents were found to reside less frequently in the high delinquency areas as compared to the other two groups; they were more likely to be in school and to be less likely to have foreign-born parents; to be more socially withdrawn; and to be typically solitary in their offenses.

The defective superego youths were, on the other hand, less often in settled residential areas; were considerably less likely to be in school; more apt to have a foreign-born father; to come from a home where the father was usually absent; and were commonly noted to be gang members.

The well-integrated delinquent likely had acquired some high-school education; was less likely to come from a home broken through separation, desertion or divorce; and less likely to come from a home marked by severe conflicts.

Bloch and Flynn. These authors (1956) schematized the social correlates of the three major psychological types of delinquency. Accepting the psychiatric classifications of the delinquent of "relatively-integrated personal controls", "relatively deficient superego controls" and "relatively weak ego controls", they articulated the following social correlates of these types.

The "relatively integrated delinquent" resides in a community characterized by very unstable, erratic and dissonant controls. This typically is a high delinquency area. He is presumed to reside within a stable and

supportive family. Given this exposure in his environment, this individual youth is expected to participate in group activities in his area which often will be of a delinquent, petty-criminal nature, such as burglary and larceny and other gang offenses.

The "defective superego delinquent" is considered to be resident in a broken, conflictful home; more often in a working class, inner-city or industrial area. There has been little opportunity for the internalization of conventional middle-class values or for the growth of a sense of guilt over wrong-doing. As a consequence, this type of youth is a natural product of his milieu, becoming a gang member and entering fully into burglary and other gang offenses.

The "relatively weak ego delinquent" is noted to be resident in a community exhibiting good and consistent community controls, but is a product of a torn and conflict-filled home. These familial experiences lead such an individual to become insecure, to develop a more hostile personality and to enter more freely into interpersonal conflicts. Such youths are termed incorrigibles: they typically are destructive vandals, and least of the three to become integrated into peer groups. They are more often solitary in their offense behaviours (Bloch & Flynn, 1956).

Redl. A renowned psychoanalyst and psychiatrist, Fritz Redl elucidated four basic delinquent types (Redl, 1956) consistent with Freudian theory. These four fundamentally different types included those who became delinquent as a defense against "wrong handling", or a wrong setting in which they lived, or against strongly traumatic experiences. There were those who became delinquent as a result of some "acute adolescent growth confusion". Redl here referred to the discrepancy between physiological maturation and lagging mental and emotional maturity, lead-

ing to inner conflicts, possibly "growing pains". The third type of delinquent became so as a result of "neurotic disturbance", which had its roots in the nature and quality of parent-child relations. For his last group the "genuine delinquent" Redl posited certain disturbances, or defects in the youth's impulse system, or of malformation of the ego, superego and ego-ideal (Redl, 1956).

Aichhorn. As one of the earliest psychoanalysts specializing in child psychiatry, August Aichhorn's influence, although only dimly felt today, was a principal and driving force four decades ago. Aichhorn explained the appearance and development of delinquency in this manner in his opus Wayward Youth (1935): Socialization influences in some settings are inadequate in leading the growing child from his asocial and egocentric state into a more socialized, gregarious state. This is usually related to an "unharmonious home situation" and lack of love from the parents. The impact of this is that the individual child remains governed by the pleasure principle because of the inhibition of personality growth and development, or because of a regression. The omnipotent pleasure principle then impels the child to acts which are inappropriate to the situation and the age of the child.

Aichhorn observed two separate groups of delinquents. There were those borderline neurotic cases with dyssocial symptoms. This individual found himself in an inner conflict because of the nature of his love relationships; a part of his own personality forbade the indulgence of libidinal desires and strivings. The dyssocial behaviour resulted from this conflict, a superego-ego-id struggle.

The second group comprised those dyssocial cases in which that part

of the ego giving rise to the dyssocial behaviour showed no trace of neurosis. The individual found himself in open conflict with his environment because the outer world had frustrated his childish libidinal desires. This was an id-reality conflict.

Insofar as the delinquent possessed little capacity for repressing instinctual impulses and for directing energy away from the primitive goals, he was thus unable to achieve what is considered by society as a normal ethical code of conduct. This was because of his unfulfilled need for tenderness, love and succorance in childhood (Aichhorn, 1935).

Horney. Karen Horney, a neo-Freudian, related the genesis of delinquency to the expression of hostility on the part of the parents toward their child early in his life, which engendered feelings of isolation, helplessness giving rise to "basic anxiety". This anxiety manifested itself in different neurotic personality syndromes and lead to one of several behavioural modes: primarily compliant, aggressive or detached. She elaborated these neurotic trends more fully:

Compliant personality - this involves "moving toward people", accepting helplessness, and trying to win affection from others, attaching oneself to the most powerful, persuading oneself that all are nice people; boundless needs for affection.

Aggressive personality - this type involves a "moving against people" where one accepts hostility, and distrusts others' feelings; they rebel openly, wanting to obtain revenge against others.

Detached personality - this type of person is characterized by a "moving away from people", one accepts isolation and has little in common; feels that others don't understand him builds his own world of interests apart from others (introversive) (Horney, 1945).

The roots, then, of all delinquent conduct are in these aspects of basic anxiety which reflect the parent-child interactions in the very first few years of life.

Bowlby. Another of the more prominent practitioners in child and adolescent psychiatry is J. Bowlby, who in 1946, published a book entitled Forty-Four Juvenile Thieves. His explanation for this mode of delinquent conduct was that early and prolonged separation from the mother-figure in a growing child's life could result in irreparable harm, as seen in an affectionless, humorless, detached individual, with no emotional ties, and no guilt. This deficiency in both the growth of ego and superego would then make it more likely that the impulses of the id would predominate and more serious thefts by children would be seen to occur. Bowlby administered a "clinical exam" to his 44 thieves and identified a selection of different character types: those who were essentially normal (2); those who were depressed and unstable (9); those who were essentially of "cyclothymic" temperaments (i.e. manic-depressives) (2); those who were "hyperthymic" (overactive, boastful and defiant) (13); those termed "affectionless" (14); those schizoid (4) and those who were "priggish" (i.e. displayed symptoms of anxiety and hysteria--none in the delinquent sample, but 8 among the 44 controls) (Bowlby, 1946).

Bowlby has identified more fully each of these types in relation to the presence and strength of the three personality components: id, ego and superego.

Sanford. Sanford also sought to define a typology of deviant behaviour in terms of psychoanalytic principles (Sanford, 1943). His three types of offenders included the presocial criminal who was characterized by an infantile superego and an ego that was weak and unable to cope with the primitive demands of the id. His crimes were not as vicious as they were annoying and chronic. The superego was of little help in curbing the id, and the id often prevailed.

The anti-social criminal had a severe superego and a strong ego. His deviance stemmed from a deep desire to renounce and subvert the establishment. His loyalty to his own deviant subculture was unflagging. With these he was sympathetic and cooperative. The id was typically under firm control and the ego was effective.

The asocial criminal combined a weak superego together with an ego that was strong: As a result, a criminal who was egocentric and narcissistic appeared. The absence of any superego controls meant that he was capable of almost any conduct and that his ego served to aid the id in the implementation of his selfish purposes. He was exploitative and immoral, attempting to turn every situation to his advantage.

Weinberg. Weinberg (1952) avoided psychoanalytic theory in his typology of delinquency. His was a four part schema. He identified the "true" psychopath who lacked the ability to postpone the satisfaction of each urge as it appeared, and had little remorse or guilt. He related adequately on a superficial social level, but couldn't sustain close intimate relationships, because his emotional responses were severely limited. He was egocentric, irresponsible and emotionally shallow.

The acting-out neurotic could form attachments; he did have a conscience, and one of his main problems was that hostility welled up from within to counter deep feelings of guilt. He was nonetheless alienated from those he cared for which served to increase his guilt, which in turn heightened feelings of hostility and ultimately isolation. Thus a vicious circle predominated.

The self-centered overindulged person rarely experienced guilt for his misdeeds; he suffered little from free-floating anxiety, and he was inclined to exploit others to his own advantage. There was often a close

relationship with one parent, and he was seen as overindulged as a child to the extent that he dominated his parents in earlier years. He manifested very wide emotional swings in which he alternately became charming, intemperate or aggressive.

The last type, the cultural deviant, was delinquent because he had been inculcated into a value system that was considered deviant by the larger society. Within his own milieu he was a "normal" member of the subculture. When judged by standards other than his own, he was seen as psychologically deviant, and even psychopathic.

Ferdinand. Ferdinand (1966) has identified three major classes of offenders: impulsive delinquents; neurotic delinquents, and symptomatic delinquents.

"Impulsive delinquents" were those for whom an absence of superego development was most prominent. Such individuals possessed adequate development of both id and ego and this pattern led to antisocial and aggressive self-seeking patterns of behaviour. Ferdinand has further specified the various forms of impulsive delinquency as the unsocialized-aggressive child; the self-centered indulged delinquent; the psychopath; and the sexual pervert.

The "neurotic delinquent" was one for whom there had been a severe treatment of the superego. It was in essence, over-developed, the consequence of this being that the ego was unable to cope with the power of the id and the superego remaining inchoate. This type of individual was left in the powerful sway of instinctual impulse and moral sanction. He was given to bouts of acting-out behaviour, over-indulgence and subsequent guilt and self-recrimination. The subtypes listed by Ferdinand were the inadequate delinquent and the crystallized delinquent.

The third major class of offenders that Ferdinand noted, were the "symptomatic delinquents". In these individuals there was adequate and normal development of all components of the personality — which was essentially healthy. For this class of offenders, both situational and environmental factors were involved in the manifestations of deviant behaviour. Ferdinand subtyped this class into the kleptomaniac, the pyromaniac, and the sexual delinquent.

Constitutional/temperamental typologies. William Sheldon, an innovative psychologist and physician, devised a theoretical approach and typological system which enabled him to virtually "read" a human being by analysing photographs and anthropometric measurements of the body and physique and to therein make certain assumptions as to his character, temperament and personality. In his (1970) work Varieties of Delinquent Youth, Sheldon has written, explaining his approach to character analysis, that:

(the) interpretation or explanation of a personality, in so far as the constitutional psychologist attempts it, is always undertaken against the frame of reference of a taxonomic description of the physical constitution.... We find no break between what is physical and what is mental To study a person the constitutional psychologist first takes a good look at the person. In so doing, he derives his frame of reference from a standard medical photograph (the Somato-type Performance Test). He thus starts with an examination of the physical organism in its most objective presentation, and he then proceeds to the study of other manifestations of personality.... The body is really an objectification, a tangible record, of the most long-standing and most deeply established habits that have been laid down during a long succession of generations. It is the deepest residual and an age-long record of ancestral habit now so firmly established that for the most part it is carried and transmitted in the parental germinal cells. (Sheldon, 1970, p. 4)

The relationship between this type of theorizing and that of Césaire Lombroso, a century earlier seems more than coincidental (cf. his "born criminal").

Sheldon credits Kretschmer's (1936) work into body types, as seminal in the development of his own approach. He elaborated three different kinds of temperaments which were expressed in three characteristically different bodily structures. The temperaments were viscerotonia, somatotonia and cerebrotonia:

Viscerotonia is manifested by relaxation, conviviality, and gluttony for food, for company, and for affection or social support. When this component is predominant the primary motive in life seems to be assimilation and conservation of energy....

Somatotonia is manifested by bodily assertiveness and by desire for muscular activity. When this component is predominant, the primary motive of life seems to be the vigorous utilization or expenditure of energy. Somatotonics love action and power....

Cerebrotonia is manifested by (1) inhibition of both viscerotonic and somatotonic expression, (2) hyperattentionality or overconsciousness. When this component is predominant one of the principal desires of life seems to be avoidance of overstimulation--hence love of concealment and avoidance of attracting attention....(Sheldon, 1970, pp. 25-28).

The more common structural representation of the viscerotonic temperament is the endomorph; of the somatotonic temperament, the mesomorph; of the cerebrotonic temperament, the ectomorph. With regard to mental illness, Sheldon postulated that each of these types led to clinically different diagnoses of mental disorders.

It should be noted that his system does not present discrete and finite types of body-temperaments. Rather a continuum is deemed to exist, with each individual exhibiting components of viscerotonia, somatotonia and cerebrotonia. For the "pure" mesomorph, mental disorders take the form of hebephrenic schizophrenia and neurasthenia; for the pure ectomorph, the illness takes the form of manic-depressive psychoses and hysteria; and for the pure endomorph the psychiatric diagnoses involve paranoid schizophrenia and psychasthenia (Sheldon, 1970).

Sheldon's charting system for the presence of each of the three bodily characteristics in any subject was based upon a quantitative analysis of photographs showing ventral, dorsal and side views. He was then able to compute, based upon the distribution of temperamental features, an Index of Delinquency, also known as an Index of Disappointingness. This measure was then utilized to determine the three kinds of delinquency, the "three ways in which an individual can fall short and therefore be disappointing":

- A. Through insufficiency, mental or medical or both;
- B. Through psychiatric delinquency; that is to say, through psychotic or psychoneurotic difficulties;
- C. Through persistent misbehaviour without evidence either of a condoning insufficiency or of clinically recognized psychiatric pathology....called residual delinquency or primary criminality. (Sheldon, 1970, p. 105)

Quantification of the Index of Disappointingness led to the following conversion (Table 2).

Glueck and Glueck. The influence of both Sheldon and Kretschmer in the work of the Gluecks is well known. They consider themselves eclectics however, as well as empiricists, in examining a wide spectrum of variables in the diagnosis and prediction of juvenile delinquency. For the purpose of prediction, they considered it important to establish a typology of offenders in order to delineate more fully the kind of individual who was likely to be a chronic offender and recidivist and those for whom acting-out of aggressive and anti-social tendencies was of less serious proportion.

Clearly, the Gluecks considered the mesomorphic body type to be most closely associated with delinquent behaviour. There is general agreement with the claim that approximately 80 percent of all delinquents fall into this somatotypic body structure classification. The Gluecks explain this finding:

Table 2

Sheldon's Index of Disappointingness

Score	Verbal Translation
1	Definite interference with the successful adjustment or integration of the personality under the cultural circumstances in which the individual must live. Not necessarily a very serious or permanent interference. A successful adaptation to this degree of involvement could be made, and an otherwise normal individual should make the adaptation without much difficulty.
2	More serious interference. Adaptation for an otherwise normal individual would necessarily be difficult, although by no means impossible.
3	Grave interference. The possibilities or directions of adaptation would be sharply curtailed, even for an individual otherwise well equipped.
4, 5, 6, 7	Crippling to fatal interference.
8, 9, 10	Interference so fatal that only through special protection or institutional care could the individual be kept alive, or could this social structure so tolerate his presence.

(Sheldon, 1970, p. 108)

...the basic reason for the excess of mesomorphs, as compared with other body types among delinquents in general, may well be that boys of predominantly mesomorphic constitution are naturally endowed with traits that especially equip them for a delinquent role under the pressure of unfavorable home conditions and the opportunities and enticements of neighbourhood culture. Endomorphs by contrast, being less energetic and less likely to act out their drives, have a lower delinquency potential than mesomorphs. True, many of the traits analyzed--aggressiveness, adventurousness, acquisitiveness, for example-- do not vary in incidence among the body types although they are etiologically implicated in the total end-product of delinquency. Nevertheless, boys who possess certain other characteristics, such as excessive energy and a tendency to act out tensions and frustration, in addition to excessive aggressive impulses and the like, are more prone to delinquency, especially if they live in the exciting and disorganized pockets of urban areas. (Glueck and Glueck, 1970, p. 80)

Glueck and Glueck recognized that there were both core types and fringe types of delinquents. Their main research into the delinquency of adolescence comprised a study of 500 delinquents and 500 non-delinquents who were matched in terms of age, general intelligence, ethnico-racial derivation, and residence in under-privileged areas:

The delinquents as a group are distinguishable from non-delinquents: (1) physically, in being essentially mesomorphic in constitution (solid, closely knit, muscular); (2) temperamentally, in being restlessly energetic, impulsive, extroverted, aggressive, destructive (often sadistic); (3) in attitude, by being hostile, resentful, defiant, suspicious, stubborn, socially assertive, adventurous, unconventional, non-submissive to authority; (4) psychologically, in tending to direct and concrete, rather than symbolic in intellectual expression, and in being less methodical in their approach to problems; (5) socioculturally, in having been reared ... in the homes of little understanding, affection, stability, or moral fibre by parents usually unfit to be effective guides and protectors or, according to psychoanalytic theory, desirable sources for emulation and the construction of a consistent, well-balanced and socially normal superego during the early stages of character development. (Glueck & Glueck, 1970, pp. 1-2)

As was noted earlier in the section dealing with predictive typologies, the Glueck's examined 111 different variables: behavioural, attitudinal, physiological, intrapsychic, interpersonal, societal, familial and socioeconomic.

In their establishment of a clinical typology of delinquents they acknowledged the efforts of other researchers to develop typologies based upon cultural and subcultural influences; or according to physique types, with their accompanying constitutionally-oriented traits; or according to traits of temperament and character (partly constitutional and partly conditioned); or according to the most significant and pervasive influences of the parent-child relationship (1970, p. 38). They sought, however, to utilize an empirical, statistical method--a multivariate approach to the derivation of clinical types.

Preliminary analysis revealed four groups of offenders: (1) those from a good family background, and highly conventional in attitude; (2) those physiologically insensitive, not suggestible, lacking in aestheticism, living in crowded home conditions, and ranking in the middle amongst siblings; (3) those highly impractical and exhibiting emotional conflicts (for example, neurotic and inhibited in motor responses to stimuli), not socially assertive, not adventurous, and low in mesomorphy; (4) those who were restless and enuretic in childhood, cyanotic, socially assertive, emotionally labile, lacking in self-control, having low verbal intelligence and unmethodical in approach to problems, but not defiant, not resentful, not hostile and not suspicious.

The delinquents were finally distributed into three groups on the basis of their predictive ratings on the cluster of the three factors, which were noted in an earlier section dealing with predictive typologies (those three factors being: supervision by mother, discipline by mother and family cohesiveness).

The Group I boy revealed a very low indication for probable delinquency:

These boys represent the small proportion of delinquents deriving from relatively wholesome families. Maternal supervision of the boy is suitable, discipline is kindly though firm, and there is marked family cohesiveness. Thus it may be anticipated that when the relevant precipitating criminogenic influences are determined, it will be found that either some unusual extra-familial circumstance or some unusual personal traits, or both, account for the antisocial behaviour of this relatively small group....

Group II boys...(have) an essentially equal chance of becoming delinquents or remaining conventional nondelinquents. The ambiguity of this category in terms of risk of delinquency would suggest that further analysis of the composition of this group will identify individuals with both favorable and unfavorable elements in family and parental backgrounds and personal traits....

Group III boys, whose predictive indications are high, that is, having 9 in 10 chances of delinquency...is essentially the category of boys whom we designated...as the "core type". In addition to various pathological factors of family life embodied in the predictive device itself (in terms of undesirable practices in regard to discipline, supervision and lack of family unity), it may be expected that a variety of other pathologic familial as well as personal influences are present. (Glueck & Glueck, 1970, p. 55)

Genetic/neurological typologies. McCord & McCord (1956) have articulated a neurological approach to the causation of delinquency and psychopathic personality. They have investigated the relationship between crime and brain damage, damaged neural structures, encephalitis, chorea, epilepsy and abnormal EEG patterns. The McCords summarized their findings in this way:

- (1) psychopaths more frequently than "normal people" show EEG abnormalities;
- (2) a greater proportion of psychopaths, when compared with normals exhibit signs of neurological disorder (tremors, exaggerated reflexes, tics, etc.);
- (3) psychopaths are probably more physiologically responsive to physical changes in their environments than non-psychopaths;
- (4) a greater proportion of psychopaths when compared with normals have a history of early diseases which can result in organic brain damage (McCord & McCord, 1956, p. 61).

Their theory (1964) suggests that organic brain damage in the individual results in severe rejection which has the intrapsychic effect of arousing unchecked impulsivity, and prevents the establishment of close affectionate ties as well as the development of empathic ability and conscience. The consequences of this pattern of growth is that erratic, inconsistent and purposeless behaviour is manifest; lack of close relationships can contribute to aggressive antisocial behaviour which arise from the lack of inhibitions.

The authors recognized the presence of the "psychogenic psychopath" who has experienced severe rejection from parental figures, acts without inhibition, on impulse, mainly due to lack of love. The "organic psychopath" with brain damage "probably to the hypothalamus" experienced mild rejection which produces the same behavioural consequences. The authors did not explain which they considered to be cause and effect in this latter group: did early brain dysfunction in the young child impair or inhibit the ability of parents to establish strong emotional bonds, or could it be that a neurologically dysfunctional individual lacked the capacity to form a suitable conscience, adequate impulse control and inhibition of aggressive drives?

Early EEG studies conducted by Silverman (1943) suggested that persistent delinquent, aggressive behaviour may be associated more frequently with neurological anomalies and abnormal EEGs. Silverman found that 80 percent of criminal psychopaths had abnormal or borderline tracings. Thompson (1953) found that 280 severe sociopathic delinquents had a significant higher number of neurological abnormalities than a comparable group of normal controls. Yoshi, et al (1962) found that delinquents, versus controls, exhibited more frequent theta-wave production in the frontal, central and temporal areas of the cerebral cortex.

Irregular spike-wave patterns occurred more frequently in the temporal areas as well (lesions in the temporal lobes have been associated in past with aggressive, uncontrolled behaviour).

Geiger (1960), in her examination of 623 acting-out juvenile delinquents with severe behaviour disorders, found that 453 (73%) produced abnormal EEGs. Earlier, Jenkins & Pacella (1943) had discovered an association between abnormal EEG tracings and epilepsy and organic brain disease in delinquent offenders.

Even today, the relationship between types of criminal conduct to EEG tracings remains unclear. It is known however that some epileptics are prone to crimes of violence (for example, those suffering from temporal lobe epilepsy) and that others commit acts that can vary from petty assaults to murder during altered states of consciousness.

Lately, there has been considerable interest in the relationship between minimal brain dysfunction (MBD) and in the behaviour of preadolescents. Youngsters displaying a variety of symptoms from extreme activity, selfishness, to uncontrolled bladder and bowel problems have been classified as hyperactive or hyperkinetic (Griffin & Griffin, 1978). A link with delinquency has been claimed by some authors as hyperactive behaviour may lead to contact with the police authorities at some point. However, a recent survey of the literature revealed that there have been no "clean" studies so far which have been able to establish a firm cause-and-effect relationship between hyperactivity (or hyperkinesis) and delinquency (Murray et al, 1976), despite the flurry of research activity in this area over the past decade.

Klinefelter's syndrome: the XYY chromosomal aberration. The genetic approach to criminal and delinquent behaviour, which has not generally been

well received by the sciences of anthropology, sociology or criminology, has attempted to relate genetic heredity as an important aspect in the development of delinquent tendencies. In normal men and women there is one pair of sex chromosomes among the 23 chromosome pairs in a body cell. In women these sex chromosomes are both alike (X chromosomes); in males there is one of each (X and Y chromosomes). It is believed that the Y chromosome determines maleness (Fox, 1971).

Jacobs, et al (1965) have reported that different chromosomal combinations may be possible (chromosomal abnormalities). These include XXY, XXX, XXXX, XXXY and XXYY types. The XYY individual is believed to be male, but exhibiting female characteristics. The XXYY is referred to as a double male (Griffin & Griffin, 1978). This double male has been associated with extreme height, a very low I. Q. border on the imbecile level, but is extremely rare in incidence. The XYY chromosomal grouping is also associated with extreme height (at least six inches taller than average, according to Jacobs). Fox (1971) reports that while the XYY type has male genitalia, he may show unusual breast development and a significant degree of mental and intellectual retardation.

Casey et al (1966) related these chromosomal types to criminal behaviour. The XYY karyotype occurred with much greater frequency in prison populations. Berman and Amir (1970) have also associated this type with higher rates of violent crime. Some authors suggest that this chromosomal type may be analogous to a "born criminal" (Sagarin, 1975; McWhirter, 1971). Money et al (1975) have worked extensively with this type of offender and have noted a much greater incidence of sexual offenses among those persons displaying the XYY karyotype. Fox (1971) and Griffin & Griffin (1978) however, caution against the overzealous wishes of geneticists such as McWhirter who would like to "put away" XYY males due to the risk factor:

The probability factor makes the criminal XYY a predictably dangerous person and the standards of the duty to take care should be accordingly raised (cited in Fox, 1971, p. 72).

Fox (1971) to the contrary, has found that the effeminate characteristics make the XYY offender less aggressive than his criminal XY counterpart:

The reality is that XYY males in an institutional setting are less violent or aggressive when compared to matched chromosomally normal fellow inmates; and their criminal histories involve crimes against property rather than persons. (p. 72)

Sociological typologies. Wenk & Halatyn (1974) and Roebuck (1967) consider the Sociological approach to center upon a philosophy which regards criminal behaviour as a product of social interaction and culture. Crime is viewed as a social phenomenon, therefore criminals must be classified in accordance with their social orientation and the values and cultural definitions in the social world in which they live. The sociologists' offender categories refer to role behaviour in specific types of situations of more or less enduring response and not to types of personality organization. Sociologists, historically, have been more interested in the relationships of the social characteristics of age, sex, race, nativity, social class, and ethnic subculture than in the construction of typologies per se.

Fisher (1962) has commented that delinquency is, in essence, a process of involvement. There is a social process of "differential association" and identification which is not different from that in which youngsters become participant in local clubs or groups. The difference does not lie in the basic process but in the nature of the behavioural demands of the group with which one becomes involved. Individuals are deemed to move into and out of the world of the delinquent subculture. They move in the direction of crime and toward conventional worlds, depending upon

experience confronting them and choices which they make from alternative possibilities.

Fisher's (1962) in-depth analysis of 20 delinquents led to the identification of three different delinquent types, or processes:

The responses of some of the subjects to questions about their delinquent behaviour and involvement reflected very slight divergence, if any, from conventional norms and standards. These persons described their delinquent behaviour in an apologetic manner and expressed obvious feelings of guilt and/or remorse. There were three such persons in the sample and they were labelled "delinquents of conventional perspective"...

In opposition to this group, there were those youngsters whose primary loyalty was markedly to the norms of the deviant social world. Delinquent behaviour was characterized by this group in a manner indicative of malicious intent, negativism, violence, and delight in flouting conventional standards. They displayed practically no evidence of guilt or remorse regarding their delinquent behaviour and involvement. Eleven of the twenty subjects were included in this category and they were labelled "delinquents of the delinquent subculture perspective"...

Another category, consisting of six subjects, was observed. These were subjects who seemed overwhelmingly ambivalent in orientation. They were not basically of a conventional orientation, nor were they thoroughgoing adherents to the norms of the delinquent subculture. Delinquent behaviour was felt to be "bad" by these subjects, but then if they refused to go along with their friends they would be called "chicken". These subjects were labelled "delinquents of ambivalent perspective". (Fisher, 1962, pp. 257-258)

Howard Polsky (1962) introduced his sociological typology of delinquency through metaphoric analogy:

Out of the actor's interaction on the stage, mutual expectations and concerns arise. Patterns emerge that come alive in the performance of social roles fostered by the action of the entire company. The full implications of the confrontations within and between the main and supporting actors gradually unfold before the audience. (Polsky, 1962, p. 69)

Polsky's dimensions in social analysis included: the pattern of social relations; subgroups; clique and role formations; consensus of

intracottage stratification (in a residential treatment setting); and emergent social structures. He maintained that subgroups and cliques readily became established among boys living in relatively close contact in a "cottage" setting. Such cliques were often composed of roommates. Cliques were considered as consolidated by intensity of contact and the exclusion of "outclique" boys.

Assumption of a cottage role was thought to depend partially upon a boy's background and personality. The most important factor determining role assumption was the network of roles available to the boy from which he must then select. Role behaviour within the cottage is conceptualized into pattern transactions within and between cliques, of which Polsky has identified five:

- (1) The Leadership Clique: Toughs. The function of leadership is to maintain the status quo. In order to maintain this equilibrium, the leader inculcates new members with group standards, delegates work and play "tasks", and eliminates or isolates unfit members. The group attacks, and defends itself from rival groups; resolves internal conflicts; and accommodates itself to the requirement of the milieu....
- (2) Con-Artists. Con-artists are boastful of their athletic prowess and sexual exploits. They are seen as playful, witty, uninhibited in interactions, and of all the cliques, the one made of these "con-men" is the most manipulative and exploitative. They believe in grasping what they can and in deceiving anyone who stands in their way.
- (3) Quiet Types. Quiet types are boys who mind their "p's and q's", and neither join up with tough guys nor accept a "bushboy" status. Frequently they are institutionalized boys who have learned to fade into the setting by keeping their emotional distance and cooperating with the boys at the top.
- (4) Bushboys. This clique, one of the low status groups, is characterized by childish regressive behaviour. Pre-occupied with their low status, they overreact to anyone's getting something "on them". This group manifested the least solidarity; they bickered constantly and displayed blatant hostility among themselves.

- (5) Scapegoats. In the authoritarian social structure, there is always one target below to be pecked at, except at the very bottom. The scapegoat may be subjected to prolonged testing and ranking if he is of middle-class origin, nonverbal, and effeminate. Depending upon his reactions to ribbing, he may become further isolated from peers in circular fashion until he is overwhelmed by physical coercion, fear, or anxiety. (Polsky, 1962, pp. 69-88)

Statuses were rigidly fixed and each boy was treated in accordance with the status assigned to him by the social system of the cottage. Social distance was greatest between subgroups and cliques; least among the members of a clique. Within each clique there were pecking orders--miniature reproductions of the cottage social organization.

One typological scheme dealing with adult offenders proposed a taxonomy of inmate types within a closed institutional setting. According to Schrag (1961) prisoners exhibited patterns of social role behaviour which the inmate "argot" identified by labels. The types elaborated included the "square John", the "right guy", the "ding", the "outlaw", and the "politician". Generally, these roles centred around loyalty attachments to other prisoners. For example, the "right guy" was a loyal member of the inmate subculture while the "square John" was alienated from that system.

A similar system to that of Schrag was developed by Sykes (1958). Observing prisoners in the New Jersey State Prison, he identified four role patterns which included the "ball buster", the "gorilla", the "merchant" and the "center man". Gibbons (1975) criticized both Schrag's and Sykes' classification schemes as being quite impressionistic and lacking specific identifying characteristics thus making them far from clear.

While a variety of sociologists have proposed offender typologies,

the "role-career" efforts with which Gibbons (1975) has been associated represents the most ambitious of these ventures. The key feature of the typological network that Gibbons identified, placed an emphasis on "role careers", which involved an attempt to specify criminal behaviour patterns which describe the lawbreaking life-career of individual persons.

The basic model involved in a role-career analysis is one of sequential stages through which deviants are presumed to proceed. Individuals get caught up in a sequence of increasingly more deviant activities, one stage following another. At any point in time, it is possible to identify specific individuals who are involved in chronic deviant careers, but who are at different points in their careers.

The typologies of delinquents and criminals revolved around five defining dimensions or definitional variables. Types have been identified in terms of various combination of characteristics exhibited by offenders within the categories of offense behaviour; interactional setting; self-concept; attitudes; and role-career. The last category is one in which the overall career pattern of lawbreaking is described. The typologies include statements about the social backgrounds of the various types, and these background characteristics were incorporated within the rubrics: social class; family background; peer group relations; contact with authorities and related agencies. Gibbons (1965) has articulated nine delinquency role-careers:

- (1) Predatory Gang Delinquent: This individual is a repetitious, serious property offender who engages in deviant acts with different collections of delinquent peers over time. Boys of this type develop "delinquent personalities" as a result of differential association. They come from lower-class, high delinquency areas; and they are products of lower-class families who fail to supervise their children properly. Though their parents and siblings are often criminalistic or delinquent, interpersonal relations within the family are devoid of pathological overtones. They are

well socialized into a delinquent peer group or subculture which provides them with support of their hostile and cynical attitudes. They do not suffer from personality aberrations....

- (2) Conflict Gang Delinquent. The "tough-guy" type who engages in "bopping", violent attacks on others and gang fights. They do not define themselves as delinquent, but rather as "tough guys". Though residing in "sociological jungles" they are not particularly hostile. They possess normal personalities, and usually they develop noncriminal adjustments in adulthood....
- (3) Casual Gang Delinquent. This type is a lower-class, high-delinquency product who engages in relatively minor and infrequent acts of delinquency, often as peripheral members of delinquent gangs. Most of their conduct is non-delinquent. They are only fringe members of delinquent gangs, and they are mostly conventional in their attitudes toward society. Their personalities are normal, and their families usually have been successful in indoctrinating their children with prosocial norms....
- (4) Casual Delinquent, Non-Gang Member. This type is defined as a "hidden delinquent" who engages in infrequent minor delinquent acts as a loner or as a member of a non-gang peer group. Typical delinquents acts include petty theft, driving without a license, smoking and drinking and vandalism. These boys define themselves as non-delinquents and express remorse and shame when apprehended for delinquent acts. They are prosocial in attitude and unlikely to commit delinquent acts once beyond the period of adolescence....
- (5) Automobile Thief-Joyrider. A "wild" boy who steals cars for joyriding purposes rather than for profit. They define themselves as non-delinquent, but have self-notions as "tough", "cool" and they frequently have adjustment problems both in school and at home. They are essentially prosocial in attitude. Usually there is a lack of intense interaction with their fathers, which breeds a problem of masculine identity. Despite this, joyriders have no serious personality problems....
- (6) Drug User (Heroin). This type is defined as a delinquent who, by virtue of addiction to heroin, engages in delinquent acts in order to purchase drugs. Juvenile drug addicts are members of a drug-user subculture characterized by mutual aid, the "hustle", the "cool cat" self-image and a disdain for "squares". Heroin users have negative attitudes toward most of society; they are not usually gang members. They are products of urban slum areas and have lower-class backgrounds. They are recruited from the groups that have the most marked feelings of low status, lack of opportunity and inability to face stressful situations....

- (7) Overly Aggressive Delinquent. This type is identified as the "lone wolf" offender who engages in apparently meaningless assaults upon peers, adults and animals, but who rarely engages in property offenses for gain. Overly aggressive delinquents see themselves as "picked upon" victims of a hostile environment. They are defiant, sensitive, and suspicious offenders who begin committing assaultive and violent acts before adolescence. Many continue in aggressive behaviour beyond adolescence and become inmates of adult correctional institutions. Severe parental rejection is characteristic of their family backgrounds. Hostile and socially inept, they do not seek peer relationships. They are described as unsocialized, aggressive personalities, with the implication of sociopathy
- (8) Female Delinquent. This type is defined as a girl who comes to the attention of authorities for sexual reasons. Promiscuous girls who associate with a number of "wild" boys and who engage in visible and promiscuous sex acts with a number of male companions are likely to be adjudicated delinquents. Delinquent girls associate with each other and with delinquent male companions; however, they are neither "gang" delinquents nor do they comprise active members of a delinquent subculture. Girls of this type do not define themselves as delinquent, but they are aware that they have problems. They manifest hostility toward their parents, whom they describe as lacking in affection. In their quest for substitute affection and understanding, they become involved in sex activities with male associates which involves them in further difficulty because they are then labelled as sex deviants....
- (9) "Behaviour Problem" Delinquent. This type is described as a shy and withdrawn "lone-wolf" offender who suffers from deep-seated personality difficulties--neurotic or pre-psychotic syndromes. Delinquent acts of such offenders are bizarre and seem to be triggered by hidden motivations, for example, arson, assault, and deviant sexual acts. They do conceive of themselves as "different" from others, but not necessarily delinquent. Many of these individuals are committed to psychiatric facilities. Many peculiar and abnormal patterns of parent-child relations are noted in their family histories (Gibbons, 1965, pp. 140-149).

Cohen and Short have studied delinquent subcultures and have identified five basic delinquent "subculture types" (Cohen & Short, 1958).

There was the parent-male subculture as the first type; the conflict-oriented subculture, which consisted of large gangs often organized with reference to a particular territory or reputation; the drug-addict sub-

culture which recruited primarily from the delinquent population and worked closely with criminals (the addict subculture was usually non-violent and utilitarian in emphasis); the semi-professional was involved in the use of "strong-arm" methods and the sale of stolen goods, and was considered a petty amateur by the professional thief; the last type was termed the middle-class delinquent subculture which represented solutions to problems peculiar to the middle class. Such members enjoyed courting disaster and assuming "playboy" type roles.

Cloward & Ohlin (1960) differentiated subcultures into three types. One was the criminal subculture which developed in a neighborhood milieu and was characterized by the presence of criminal role models, the existence of class bonds between different age groups of offenders, and between criminal and conventional elements. Legitimate means to success were considered to be blocked but illegitimate means open. Regularized criminal patterns were present and criminals who indulged in these patterns were readily accessible as role models.

The next type was the conflict subculture which developed in disorganized, mobile, new slums where organized crime was not yet present. Youths in these areas were exposed to acute frustration because access to success goals were blocked by all of the regular channels, either legitimate or illegitimate. Adolescents of this type utilized violence as a route to status and recognition. They placed a premium upon "guts", the capacity to endure pain and to inflict pain upon others with callous regard.

The third, retreatist or drug-use subculture developed among persons who were "two-time losers". Double failures resulted from any one of three causes: internalized prohibitions against theft and violence; failure to make it in the criminal gang or in the violent gang; and the objec-

tive unavailability of violence or theft as solutions. Some adolescent double failures turned to drugs as a solution to their status dilemma.

Yablonsky (1962) identified three types of gangs. The first was the social gang. For the most part, this was a law-abiding group of adequately socialized youth who "hung together" because of comradeship and a strong "esprit de corps". Gang activities were socially dominated and include organized participation, personal discussions, organizing of dances and other socially acceptable activities characteristic of youth. Membership was long-enduring and not based upon self-protection. Leadership was based upon popularity and constructive leadership qualities.

The delinquent gang was primarily organized to participate in various illegal acts motivated by profit--not simply for "kicks". Such gang offenses included: burglary, petty theft, muggings, and assault for profit. Membership was usually enduring and included a small mobile clique of emotionally stable youths who were socialized into the acceptance of deviant patterns of conduct. The leader was the most effective thief, the best organizer and planner of delinquent activities.

The violent gang organized for the purpose of emotional gratification. Violence was its central theme. All other activities including delinquent activities were incidental to its paramount violent pattern. The violent gang's organization and membership constantly shifted depending upon the emotional needs of its members. Leaders of violent gangs exaggerated membership size as a psychological weapon against other gangs as well as for self-aggrandizement. Gang arsenals included: switchblades, assorted knives, blackjacks, handguns, etc. Intra-group and inter-group conflicts were characteristic. Violent gangs seemed to emerge spontaneously. It was created by and attracted sociopathic youths who enjoyed fighting and violence for its own sake.

Phenomeno-psychological typologies. This section has been so designated as the classification schemes elaborated herein consider all behaviour within the context of the normal pattern of psychological growth in the individual. They recognize the important influence of environmental and social experiences upon the prevailing intrapsychic structure and organization, but they refrain from utilizing pathological referents or the belief that the individual is in some form a "diseased or defective organism", as was evident in some of the typologies presented earlier. It also has been labelled phenomenologic, as these theorists also consider the importance of current ongoing and future events upon the individual's psychological complexion and personality structure.

Cavan and Ferdinand. Cavan and Ferdinand have recently teamed to present a new social-psychological approach to the identification of psychological types of delinquent offenders (Cavan & Ferdinand, 1975). They have identified six new types of delinquents, describing them as follows:

- (1) Cultural identifiers are individuals who exhibit organization ability and have leadership potential. Their ability to sympathize with the underdog makes them prime candidates for gang leadership. They may transform loosely organized cliques into viable organizations with ideological goals.
- (2) Manipulators have an uncanny ability to judge the character of those with whom they interact and identify their weaknesses. Ruthless and self-centered, their relations with others are generally quite shallow.
- (3) Asocial-aggressive individuals tend to use violence to solve all frustration. Their unpredictable and unreliable nature is not conducive to sociability.
- (4) Asocial-passive individuals are isolated from others. Their personality is therefore primitive and underdeveloped.
- (5) Immature-conformists or cultural-conformists seek the approval of others and readily succumb to group pressures. They do whatever is necessary to maintain friendship and are ineffective when left alone.

- (6) Neurotic-delinquents are unhappy, inhibited individuals who often play the "scapegoat" in group situations. Delinquent activities may seek to establish a sense of power and control. (Cavan & Ferdinand, 1975, pp. 162-167)

Cavan and Ferdinand have stated that each of these psychological types may be associated with different kinds of offense behaviours, but they allow flexibility in assigning specific offenses to specific categories.

Warren. As noted, Warren (1971) is one of the few delinquency theorists who have attempted to reorganize the many typologies of delinquency into a synthetic taxonomy. Her cross-classification of psychogenic typologies is grouped into six bands:

- (1) The Asocial Type. The offender in this band is described as primitive, under-inhibited, impulsive, hostile, insecure, inadequate, maladaptive, concretely negativistic, undifferentiated, demanding of immediate gratification, non-trusting, thoroughly egocentric, alienated, etc. It is generally agreed that this type of offender does not see himself as delinquent or criminal, but rather sees himself as the victim of an unreasonable, hostile and confusing world.
- (2) The Conformist Type. The offender classified in this band is described as concerned with power, searching for structure, dominated by the need for social approval, conforming to external pressure, rule-oriented, unable to empathize, cognitively concrete, having low self-esteem, conventional and stereotyped in understanding, oriented to short-term goals, having superficial relationships with others, and self-representing as problem-free. This Conformist group has been subdivided further by some investigators into groups consisting of those individuals whose self-perception is non-delinquent but who conform to the immediate power structure, delinquent or nondelinquent.
- (3) The Antisocial-Manipulator. The offender described in this band is viewed as not having internalized conventional values and morals, guilt free, self-satisfied, power-oriented, counter-active to the authority system, nontrusting, emotionally insulated, cynical, callous and extremely hostile. There are distrustful and angry families in which members are involved in competitive and mutually exploitive concerns, parents who feel deprived and who expect their children to meet their dependency needs, alternating patterns of over-indulgence and frustration of the children, and inconsistent parental patterns of affection and rejection.

- (4) The Neurotic Offender. As indicated by the terms "intimidated", "disturbed", "overinhibited", "anxious", "depressed" and "withdrawn", most investigators have identified an offender type in which symptoms of maladjustment are clearly visible. This type of offender is often the victim of parental anxiety or neurotic conflicts between parents, with the offense viewed as a masculine identity striving. Some investigators have found a fairly typical role-reversal phenomenon in which the child, at an early age, finds himself expected to play a mature, responsible role with a child-like parent.
- (5) The Subcultural Identifier. The essential characteristic of this type of offender is that the individual, although developing "normally" in most respects, has internalized the value system of a deviant subculture. Thus, violation behaviour, for example stealing from representatives of the larger culture, becomes simply an expression of what the Subcultural Identifier considers "right". Investigators describe this offender type as interpersonally responsive, psychosocially healthy, loyal to his own principles and his own group, adequate, proud, suspicious of the authority system, capable of identifying himself with a mature socialized person, and accessible to new experiences. Those investigators who have focussed on offender behaviour and delinquent attitudes have not distinguished between the Subcultural-Identifier and the Subcultural-Conformist. Striking differences between the two groups appear when the foci of observation are family stability and concern, individual capacity for self-knowledge and self-evaluation and differentiated perception of others, interpersonal relationship ability, goal orientation, concern with status, time perspective, etc.
- (6) The Situational Offender. Offenders in this group are represented as normal individuals who give no evidence for the term psychoneurosis or psychopathy to be applied and for whom crime is ego-alien. These individuals presumably find themselves involved in antisocial behaviour as a result of accidental circumstances or a specific, nonrecurring situation that taxed their normal coping capacities. Thus, "treatment" is either considered unnecessary or, if one is oriented toward helping the individual to focuss on a specific social or personal problem which may have led to lawbreaking. (Warren, 1971, pp. 248-251).

Interpersonal maturity level theory and classification

Historical development. In the period following the end of the Second World War, the United States Navy began to direct some of its efforts into a research program intended to provide treatment to its "nonconformists". Camp Elliot, based in San Diego, was one of several

institutions built for the confinement and retraining of court-martialled sailors and marines. Camp Elliot housed approximately 1,000 men who were interned there for offenses ranging from absence with official leave (A.W.O.L.) (approximately 85 percent of the inmate population) to murder. The average period of confinement was calculated to be four months, at which time two-thirds of the detainees were returned to active military duty (Grant, 1965).

Three principal questions were examined by the researchers at Camp Elliot:

What are the personality characteristics of the recruit who will prove himself a nonconformist?

With men who demonstrate extreme nonconformity, what are the characteristics of those who will be able to modify their behaviour sufficiently to adjust to the group aspects of military life?

What is the nature of the process that brings about attitudinal and behavioural change in the nonconformist so that he is able to meet the demands of military life? (Grant & Grant 1959, p. 127)

The principal investigators at the United States Navy Retraining Command at Camp Elliot were J. Douglas Grant and Marguerite Q. Grant, both clinical psychologists trained in California in the 1940's. These investigators admitted, early on, a certain disaffection with methods of psychotherapy extant during this period. They recognized that traditional psychoanalytic methods had not proven to be of much utility in the treatment of delinquent persons, commenting:

The treatment rationale for this (Camp Elliot) study developed from an awareness of the pessimism being expressed regarding the possibility of curing delinquents with traditional methods of psychotherapy. Traditionally, psychotherapy was aimed at helping the neurotic whose conflicts are internalized, and who carries guilt and anxiety with him. This kind of neurotic tends to know that he is upset or uncomfortable. He may, for example, feel afraid, have bad dreams, or not be able to speak in groups. In contrast, the acting-out personality tends to

dissipate his anxiety before he feels it by running away, striking at someone, or having an affair. Since the acting-out personality resolves his uncomfortableness, he abates any felt need for personality change. Traditional psychotherapeutic methods are not nearly as appropriate for this kind of personality, since he feels no need to change and since he most certainly would run away from any therapy relationship which made him feel anxious. (Grant, 1965, pp. 277-278)

Grant then elaborated upon the direction which the Camp Elliot project adopted, noting:

Since a majority of delinquents are acting-out personalities, the task in treatment becomes one of putting the offender in a nonpanic-producing correctional situation, which keeps him concerned about and facing his problems, in an attempt to bring out personality change in him. Acceptance of a need to change or grow results from a challenging uncomfortableness. Since this prerequisite for personality change--this uncomfortableness--is absent or easily dissipated, it needs to be created or maintained for the acting-out person. However, intense anxiety leads to rigidifying panic where no personality change can occur. Therefore, the goal of the treatment program is to maintain a situation which would produce in the subjects a challenging uncomfortableness without rigidifying panic. (1965, p. 278)

In order to achieve this end, the research program involved assignment of subjects to living units for periods of up to two and one-half months where twenty men, and three supervisors, "lived together in the same barracks, ate together, worked on a farm as a unit, held classes together, and participated as a team in recreational activities" (Grant, 1965, p. 278). The group was "closed" in an absolute sense: all contacts with persons outside of the group were discontinued. In fact "great effort" was made to eliminate any interpersonal dealings with any outgroup members. As such, the attempt was made to establish close, continuing interpersonal relationships within the group, with "no way out". Accordingly any opportunities for acting-out or of running-away from disconcerting and stressful involvements were precluded. The group members were, in essence, forced into resolving interpersonal problems that arose in the context of the group.

For each treatment unit a research psychologist served to maximize "uncomfortableness" while simultaneously fortifying group members against "rigidifying panic". The consultant's main function was to conduct a 90 minute group-therapy session with each unit five days a week. During these sessions, group members were encouraged toward social maturity by a "forced working through" of the anxiety provided for in the close interpersonal relationships. The focus remained upon the interpersonal interactions within the group, and an attempt was made to sensitize all members to interpersonal dealings not only within themselves but in their observations of others as well.

Grant & Grant (1959) noted that there were two classes of offenders which were considerably different from one another. Those individuals who were termed "low maturity" were described as primarily concerned with the rules of "how to get along", frequently manipulated relationships, responded only to threats of external punishment rather than to inner controls (that is, they demonstrated an "externalized superego"), tended to deny anxiety, and showed a general resistance to looking inside themselves (Grant, 1965, p. 279).

"High maturity" subjects, on the other hand, demonstrated a much more differentiated perception of other people and some capacity for empathy and identification. They tended to be anxious, either openly or symptomatically, they felt guilt, regret, remorse and they showed some capacity for reflection. It was predicted that such men would respond more favourably to the treatment program than men classed as low maturity (p. 280).

A novel component of this study was that the investigators also rated the supervisory teams as to predictive, or projected, effectiveness in

their dealings with these nonconformists. Their evaluations as to high-, or low-effectiveness were based upon subjective impressions regarding supervisors' maturity and flexibility.

This analysis then produced some very interesting findings regarding the impact of different supervisory "styles" upon the restoration success of offenders. More specifically, the supervisory team judged most effective (that is, in the sense of bringing about positive change) was associated with greatest restoration success in high maturity subjects, but paradoxically, these most effective supervisors were least influential with low maturity offenders. The results indicated rather that the supervisors judged least effective, or least likely to bring about change with low-level nonconformists were, in fact, the most influential in bringing out a meaningful positive response in the post-treatment phase for only the low maturity offenders.

The treatment team predicted most effective was described by Grant (1965) as:

...generally (holding) higher status among their peers, as indicated by their selection as the best research men, the most socially mature, the best for retrainee morale, and the best in changing delinquency attitudes. They were in fact effective with high maturity subjects, but low maturity subjects did significantly worse under their supervision. These team members were described as sincere, helpful, honest, able to get the most work out of trainees, most able to sacrifice self-interest for that of others, and rejecting of other research company staff members. The picture seems to be one of stern dedication to the task of changing retrainee personality--with both supervisor and retrainee driven hard to accomplish this goal. Seen as more poised and somehow grown-up than other teams, they were also seen as somewhat aloof....

The members of the third ranking team--predicted least effective in changing delinquency attitudes, and the one that proved actually to be the most effective with low maturity subjects--were described by their peers as follows: "They stay away from retrainees, act superior, and think retrainees are bad

actors; they act as if they should get a medal for doing what everyone has to do; they are lone wolves, anxious to be seen as not contaminated by research or by other ship's company personnel; they are good Marines, but should never have been given an assignment in a research company". They were described as not understanding the retrainee's point of view, unable to sacrifice self-interest for that of others, not concerned with having retrainees like them, closed to new ideas, disliking to take chances, not friendly, not relaxed, undemocratic, and not resentful of authority people. The roles of dictator and maximum security guard were assigned to them significantly more often than to members of other teams. These items give a picture of men who are conforming, status-oriented, concerned with self-aggrandizement and in maintaining status quo, socially rather isolated and, perhaps, potentially emotionally explosive. They were described as the most strict with retrainees, the least socially mature, but as the most effective Marine non-commissioned officers. (Grant, 1965, pp. 281-283)

High-maturity subjects then, seeing themselves as "in trouble" and being very concerned about this, reacted most favourably to a "therapeutic community experience" which was in marked contrast to the orthodox military setting. They did not respond well to the community experience within the more traditional military-authoritarian structure.

Conversely, the low-maturity subjects responded most favourably to supervision which marked the least departure from a known and understood rule-oriented experience. They reacted to the therapy-oriented experience with appreciably more acting-out behaviours. Presumably, the appeal to self-reflection and interpersonal-interchange created a poorly tolerated increase in anxiety. Seemingly then, with the more authoritarian supervisory team, the low maturity subjects had more success playing the "good Marine" game.

These observations were to prove to be among the more important from the Camp Elliot Project: that the type of supervisor/supervision offered was as important as the type of offender being treated. This observation has figured prominently in the later application of Interpersonal Maturity Level theory with juvenile offenders--a most recent

application of the kind of offender/kind of treater experimentation being conducted in 1976 in Winnipeg (Barkwell, 1976).

Interpersonal Maturity Level Theory

Sullivan, Grant and Grant (1957) have proposed a developmental theory of personality which posits that inner psychological change is dependent upon interactions among individuals, groups and situations.

A premise basic to their theory is that the developing human organism is unable to accommodate the vast array of complex stimuli impinging from the external environment, and that reference points became established which permit the individual to comprehend and order the outer world. Sullivan et al state that these reference points are neither static nor in isolation from one another. They are interrelated in such a way that a basic central reference or cognitive world is formed. Subsumed within this cognitive world is the experienced world which is modified by organismic and personal needs and expectations. Thus a cognitive structure develops within the individual which reflects his perceptions of the 'outer world', its organization and structure as well as his 'inner world' and organismic/biological and (presumably) socio-emotional/affective needs.

Over a period of time, a relatively consistent set of expectations and attitudes become established through which the individual interprets his world. It serves as a working philosophy of life. This progressively expanding nexus of experience, expectation and perception make up what is termed the "core personality". Of central importance are communication and social interaction in the development of this core personality helping to expand the basic potential with which a person is born.

Sullivan et al state that a basic core structure of personality

should not be viewed as stable in content, but rather as an integration of principles and percepts around which a variety of content can be organized. Psychological growth does not follow an even course but it is marked by growth spurts, periods of insight and reorganization which are interspersed with periods of relative stability and maintenance. With these periods of stability is introduced the notion of stages of development. Growth from one "stage" to the next higher level is considered to occur in the following manner: As the pattern of social and emotional development follows a normal course toward increasing involvement with people, objects and social institutions, these involvements give rise to new needs, demands and situations. Inherent in many of these new situations are problems of perceptual discrimination with regard to the relationships extant with the self and external environment. As these discriminations are made and assimilated, a "cognitive restructuring" takes place. A new scheme or frame of reference then develops and a new and higher level of integration is obtained. Of import is the indication that the potentiality for change and growth depends upon factors within the prevailing organization which direct the nature and character of subsequent reorganizations. Thus, the foundation for subsequent integrations is laid in preceding levels. The synthesis and resolution of problems at one stage of development are essential for the attainment perception of the next level. As Sullivan et al state, each new level of integration may be regarded as the psychological analogue of an increasingly efficient optical lens. The more advanced the sequel of integration, the less likely perceptual distortion will occur. Presumably, the individual may then view himself and the world more accurately and operate more effectively. (1957, pp. 373-375)

Sullivan et al (1957), comment upon several important points in Interpersonal theory:

The individual is always involved in a process of differentiation and synthesis. An individual tends to become more differentiated, and to move toward more complex patterns of organization, but simultaneously, to assimilate new perceptions in such a way as to require the least amount of cognitive reorganization-- he thus becomes more simplified and integrated.

The concept of core personality is useful in accounting for the findings that some individuals within a given community prove susceptible to delinquency while others within that milieu are seemingly 'fortified' against such conduct.

Through a process of acculturation and direct learning processes, a person builds within himself an integrated system of goals, values and aspirations which are uniquely satisfying to him, and are manageable by him. Without such simplification and integration, the complexity of stimuli impinging upon the individual organism would be overwhelming. (1957, pp. 374-375)

Sullivan et al conceptualize psychological development within a series of seven successive levels or integrations. Each stage or level is defined by a "crucial interpersonal problem" which must be resolved before further progress toward maturity can occur. All persons do not necessarily work their way through all of the levels, but may become fixed at a particular integration stage. The authors suggest that it is within the lower levels that delinquents are more likely to be found for the perceptual distortions that they are prone to make, will likely lead to difficulty and conflict with others which may eventuate in apprehension.

The developing child is thought to be exposed to numerous pressures

and threats which may arouse feelings of anxiety, uncertainty and doubt regarding the adequacy of himself and his current mode of interpersonal functioning. If such a need continues over a protracted period, a characteristic pattern or "style of life" may be established. With an impaired or inferior potential for change, a person may utilize a variety of defenses to maintain his "stable position".

What follows is a description of each of the seven levels of interpersonal integration, the "need" or "crucial interpersonal problem" which must be solved at each level prior to escalation to a higher level, the type of functioning indicated by persons at each level and the mode of delinquent behaviour conduct suggested in those levels at which anti-social conduct has been observed.

At Level-1, the problem of discrimination between self and nonself is predominant. The infant, starting life, does not see himself as separate from the world. His perceptual organization is related to the modes by which a homeostatic balance at the physiological level is maintained. Since he cannot reduce tension without interaction with things outside himself, the infant begins to make some differentiation between that which is self and that which is nonself. People are treated as 'nonself-relievers' of basic tensions. For example, a child at this stage of perceptual differentiation and interpersonal integration makes negligible distinction between the mother's breast and a nursing bottle.

An adult who is actively maintaining an integration at this level seems to be operating as if he were essentially "the whole world". Basically, this is a kind of schizoid adjustment since it takes a gross distortion of reality to maintain it; the person must misinterpret--or

be unaware of--vast amounts of information about the interplay between himself and his environment. Such a person has much difficulty in making fine distinctions between reality and nonreality. He struggles to maintain the primitive feelings of omnipotence which he has had since birth and an indulgence in superstitious beliefs, and in the adherence to mystical formulae for control are often seen.

Such a way of dealing with the world invariably leads to difficulty and sometimes to delinquency. Lacking comprehension of the order and organization in society, and with no acceptance of any idea other than his own, the Level-1 person is quite probably to be at odds with his society. Adults who typically operate from this frame of reference are most likely to be found in mental hospitals.

At Level-2, the interpersonal problem involves the differentiation of the environment into persons and objects with some appreciation of the characteristics of each. Here the developing personality becomes concerned with the problem of how to control the rest of the world. People are seen as kinds of means- objects to ends- objects. An individual maintaining a Level-2 integration is faced with the realization that persons sometimes do not give him what he wants; and his consequent lack of information about them makes him feel uncertain about his ability to predict what others will do. He thus operates with an essentially 'autistic' approach to life. He sees others in terms of his own needs and feels that something is wrong with those means- objects which do not give him satisfactions, and he therefore blames those outside himself for the difficulties and deprivations which may periodically arise. People then act only as aides or barriers to his own satisfactions. He senses that he must communicate his desires to others but is baffled

when his demands are not immediately gratified. When he feels deprived, his anxiety is intense because his integration system is threatened. In his need to master objects, situations, and people, he will frequently fall into a pattern of very crude manipulation tending to use people as tools without any awareness of their feelings and without regard for consequences to them or himself.

When such a person meets denial a characteristic pattern of response is likely to emerge. He may openly express anger and resentment at being blocked or he may seem to respond to denial simply by leaving the field, inhibiting any outward expression of the hostility he feels. Some personalities seem to avoid either overt expression of aggressiveness or leaving of a relationship. Instead, a kind of "yes, Sir" compliance may appear as an immediate response to a denial situation. Superficially, these persons appear ineffectual, docile, unorganized without clear-cut goals, and completely dominated by the powers of the moment. Beneath this however, one observes a "smouldering resentment" and an indication that such a person feels that he passes through life feeling misunderstood and mistreated. Typically, he makes extreme demands of others. He not only accepts dependency, but expects others to satisfy his needs as well.

The problem for the Level-3 personality centers upon the perception of rules or formulae which govern the relationships between people and objects, with a beginning awareness of potential for complex manipulation.

For the Level-3 individual, there is a discovery that formulae or expectancies govern the relationships between people, and between people and objects. It is learned that not only must one be in contact with

someone else in order to obtain satisfactions, but that there are necessarily stringent rules in society which govern the access to these satisfactions.

The individual is taught both implicitly and explicitly, that the rules governing these relationships can seemingly control "big" people. With this belief, an individual tends to transfer feelings about the magic of people to the magic of rules. Rules are now seen as being the mystical talismans of control. Rules do, however, seem more or less arbitrary and if these rules and expectations are enforced too punitively or too harshly, the child may develop a concomitant fear and resentment of external control; or, if the rules are inconsistently administered, he may become confused and fearful in his attitudes. He attempts to resolve such stresses through a persistent testing of the limits of the rules.

An adult's personality at this level is built upon the premise that the world is a series of rigidly organized, rule-bound relationships. The adult understands the behaviour of others purely as a reflection of his own manipulations and seeks the final and absolute social rules which will define exactly what is expected of him and what he must avoid so that he may later invoke the rule to get what he wants, thus controlling others, as he feels controlled.

There are at least two response sets in dealing with the world from this perceptual integration: The Level-3 "confidence man" personality is based upon the premise that each party in any relationship will try to manipulate the rules so as to produce whatever effect is personally most desirable. Functioning from such a frame of reference, he trusts no one, and although he may have many useful acquaintances he has no

long-term relationships. The adult who functions at this integration level becomes anxious under circumstances which force an emotional recognition that he does not have the key to "winning friends and influencing people". In his struggle to manipulate his increasingly differentiated world, it is mandatory that his formula for interpersonal control be flawless. Any indication that there are others with better ways of "making out" undermines this person's security. At this level, he still sees people primarily as means to his own ends and because the need persists to have desires fulfilled immediately and easily, ways of gratification will likely be adopted which will be in conflict with social norms and laws.

The Level-3 "conformist" personality is based upon the belief that if a person conforms to the demands of others--demand defined in terms of the rules expressed by those around him--he will have his own demands satisfied; otherwise, he will be denied satisfactions.

The Level-3 conformists's personality is likely to get him into difficulty through the chameleon-like tendency to shift his behaviour to fit the situation confronting him. He will respond to whatever concrete external controls are imposed upon him at the moment. While he may declare sorrow over wrong-doing in the past (or present), he will not feel guilty in a "true" sense. He is trying to get along with whatever external authority happens to be present. The delinquent at this level appears to recognize and to accept the value system of those in control. He has what has been referred to elsewhere as an "externalized superego". He will be sorry again when he is caught but will lose neither sleep nor appetite in the meantime. Superficially, this person appears mentally healthy; having no classical neurotic symptoms he is often

cooperative and likeable. Such a person may become an "institutionalized personality" since his integration fits nicely within the well-defined external limits.

The central interpersonal problem for the Level-4 individual involves the perception of the influence and "psychological force" of others.

Social anxiety for the Level-4 personality begins to emerge as a motivating force. He has accepted the impossibility of controlling the whole world or of manipulating it. He does want approval and power from high status persons in his society and in his quest for this, he submits his actions to the criteria of others' responses to him. He tries then to see himself as others may see him; he attempts to predict their reactions toward him. By introjecting into his own reaction system the responses of others to his behaviour, he comes to experience himself as a social being. The individual at this level is noted to begin to role-play. In occupying himself with these roles, the child is trying to handle his feelings of inadequacy by identifying with powerful figures. The child becomes a "hero worshipper" and accepts the values inherent in the roles of his heroes uncritically and in large undifferentiated "chunks" of behaviour. However, because he does not see that the role behaviour that he is imitating is a part of a total organization having unique personal consistency and stability, nor that the roles of others are more or less, discrete, disjunctive acts with little or no continuity, he invariably fails to live up to the standards which he seeks to strive toward. Resultant guilt and self-criticism are then commonplace. This inner conflict involves a failure of self-realization, and which then results in a variety of neurotic symptoms: feelings of dependency

inhibit the expansion of the self; the inability to play an accepted role is weakening to the will; conflict and emotional frustration inhibit freedom of expression, and so forth. An adult may project his own desires and fears upon his own children; or as a boss he may become a minor tyrant; he may rigidly dichotomize the world into totally good or totally bad--seeing himself as totally good and denying parts of himself that are unacceptable. He closely resembles the authoritarian personality and is likely to be a rather tense, suspicious, bewildered, possibly hostile, always anxious personality, a person caught in a circular struggle with new and socially determined feelings of guilt.

In his struggle with internalized guilt, he faces all of the "torments of self-incrimination". The manifestations of this anguish are noted in psychosomatic symptoms, insomnia, and the like. Such discomfort however, holds a strong potential for change toward maturity which is not present in previous integrations.

A person may resort to antisocial acts at this level in an attempt to balance the stresses he feels. Possibly, under the cover of "getting drunk" or "blacking out" he may do things which would flood him with guilt if he were consciously aware of his behaviour.

Blaming others for his difficulty, and as a reaction against his feelings of inadequacy, he may become a petty-delinquent gang-leader, desirous of prestige, domination, and admiration for his antisocial exploits, as well as serving as a hero for his fellow gang-members. This type of person, because of feelings of guilt and inferiority, commits crimes under the compulsion to substantiate his guilt feelings, with the desire to assert his own imbalance by living up to it. This type of person takes refuge within the context of the group, and will project his destructive tendencies more safely there than he can alone:

vandalism may result. One also finds much scapegoat activity where one's own feelings of self-deficiency and self-hate are transferred to those of others who are different. Gang fights, "rumbles" and other such delinquent activities are possible manifestations arising in this level of personality organization.

The Level-5 personality is concerned with the perception of stable action in both self and others.

The Level-5 person begins to perceive patterns of relationships and significant symbols identifying these relationships and through this he learns about distinctions made in his own society. He becomes aware of the continuity in his own life and in the lives of others and he begins to differentiate roles for himself and others which are appropriate for different situations. He begins to perceive others as complex, flexible objects who cannot be dealt with on the basis of a few simple rule-of-thumb procedures. Most importantly, he comes to have a comprehension of what others are feeling. A person at this level of integration might become delinquent, however his delinquency would likely be situationally determined. A cultural delinquent, raised in a uniquely deviant sub-cultural environment, which calls for role behaviour not normally tolerated by the larger society, is an example.

The Level-6 personality seeks to perceive the differences between oneself and the social roles which one may play momentarily.

The major distinguishing characteristic of this level is that the individual is now able to make a differentiation between self and role: Roles are defined in terms of relationships and interactions with others. The self is now perceived as separate and distinct from any specific relationships with others.

This frame of reference allows the individual to see people, including himself, as relatively enduring, stable organisms, because he knows that a person is more than his various roles and shifting behaviour. Rarely is a person at this level of personality organization found to be engaged in delinquent activities. Such is his concern for the welfare of others as to preclude such conduct.

At Level-7, there occurs the perception of integrating processes in both self and others.

At previous levels, the person has developed tolerance for the shifting roles and even for inconsistencies in self-structure. Now, at this most mature level of interpersonal maturity there is, along with an increasing awareness of the process of integration in himself, a new perspective, albeit inchoate, of previous modes of experiencing and of the order and consistency even in seemingly inconsistent modes of interpersonal functioning. Such development greatly enhances his capacity for understanding and dealing with people who may be functioning at integration levels other than his own. He is able to empathize with the mode of experiencing of a less mature person and sees the other's behaviour as a result of his particular integration process.

According to the authors it is probable that few complete this final stage in society today, for a person characterized completely by this kind of integration might be regarded as somewhat strange or unusual. (Sullivan, Grant & Grant, 1957, pp. 373-385)

To summarize, psychological growth and development can be characterized in terms of seven successive levels of integrations. Each stage or level is defined by a crucial interpersonal problem which must be solved before further progress toward maturity can occur. All

persons do not necessarily work their way through all seven levels but may become fixated at any one of the lower integration levels. Fixated development is considered to be a function of situations which are exceedingly stressful or threatening, arousing feelings of uncertainty about ones' own adequacy, self-assurance and confidence. These feelings are resisted through a variety of defence mechanisms which serve to reinforce the status quo and reinstate a relative state of security and stability. If such need continues over a relatively lengthy period of time, a characteristic 'style of life' and consistent mode of interaction becomes established. With an unimpaired potential for change, both inner and outer stimuli arise to challenge the equilibrium; with an impaired potential for change, these stimuli act to arouse defenses which serve to aid the person in maintaining a stable position.

While I-level theory first appeared in 1957, in later years Marguerite Warren (1966) introduced this theory in her work with delinquents in California. Research has shown (Palmer, 1971), that over 99 percent of the delinquents in institutional care could be identified at levels of integration in mid-range, specifically levels 2, 3, and 4. In view of this, a fuller description of the personality and behavioural characteristics of individuals functioning at these levels is provided. Jesness (1971a) and Palmer (1971) have, working along with Warren at the California Youth Authority, developed this theory extensively in pilot projects and experimental therapeutic communities established within large residential institutions and juvenile halls. Jesness (1974) describes the "delinquent" levels thus:

Maturity Level 2 (I2):

The I2 perceives the world in an egocentric manner, being concerned primarily with his own needs. His behaviour is impulsive, and he shows limited awareness of its effect upon others. He blames others for denying him, but does not understand why they do this or what they expect of him.

His perception of reality is often distorted, but in spite of present difficulties and conflicts, he is optimistic about the future and frequently makes unrealistic plans. On the other hand, he feels he is a "receiver of life's impact"; unfortunate things just happen to him.

He frequently expresses resentment toward adults and complains about not having his desires fulfilled. In an attempt to achieve gratification, the I2 attaches himself to anyone who shows him kindness or gives him something. He lacks ability to handle frustration or control incoming stimuli. Because the I2 feels the world should take care of him he defines other people in terms of whether they give or withhold things from him. Beyond this, he has little conception of interpersonal differences and has difficulty explaining, understanding or predicting the behaviour and reactions of others. As a result, some I2's react suddenly, sometimes violently, seldom expressing remorse about their behaviour. Under stress, the I2 may attempt to withdraw from the situation. An appearance of complete docility often hides feelings of resentment and of being misunderstood. The I2 suffers poor peer relationships and is often the object of scapegoating. He has few social skills and his attempts at relating often appear insincere and clumsy. Delinquency seems to stem from poor impulse control or inability to cope with external pressures, including those exerted by peers.

The important differentiating characteristic between the unsocialized aggressive and the unsocialized passive I2 types is in the nature of their response to frustration or demands: the unsocialized aggressive reacts in a hostile or aggressive manner; the unsocialized passive complains or passively withdraws....

Maturity Level 3 (I3):

The I3 attempts to manipulate his environment to get what he wants. In contrast with the I2, he is aware that his own behaviour has something to do with whether or not he gets what he wants. Efforts to attain his ends may be in the form of conformance to the perceived power structure or "conning" or manipulation. The I3 seeks structure in terms of rules and formulas for behaving in the immediate social context. He tends to deny the existence of personal problems, describing his difficulties as external and resulting from a conflict between himself and the environment. Although the I3 may have learned to play a few stereotyped roles,

he does not empathize fully with others. He has difficulty perceiving personality and behavioural differences among others; and his conceptions of them are usually limited to the roles these people fulfill (mother, teacher, mechanic) or are presented in terms of stereotyped, socially desirable descriptions (hard-working, nice, friendly, etc). (pp. 4-6)

Maturity Level 4 (I4):

An individual whose understanding and behaviour are integrated at this level has an internalized set of standards by which he judges his and others' behaviour. He is aware of the influence of others on him and their expectations of him. To a certain extent, he is aware of the effects of his own behaviour on others. He wants to be like the people he admires. He may feel guilty about not measuring up to his internalized standards. If so, conflict produced by these feelings of inadequacy or guilt may be internalized with subsequent neurotic symptoms or acted out in an antisocial behaviour. Instead of guilt over self-worth, he may feel conflict over values. Or, without conflict, he may admire and identify with delinquent models, internalizing their delinquent values (Warren, 1966, p.2).

Research into I-level

Among the earliest investigations of the I-level theory and classification system is that of Jesness (1968) whose research revealed that individualized treatment of institutional offenders which had been based upon their unique modes of interpersonal functioning greatly facilitated offender response to rehabilitation in comparison with a control group of "traditionally treated" adolescent inmates.

More recently, Jesness (1975a) has shown that therapeutic intervention programs such as transactional analysis and behavioural modification have differential impact upon institutionalized delinquents at various levels of interpersonal maturity.

Andrew's (1974) investigation into I-level revealed that the P > V sign on the Wechsler Intelligence Scale for Children was more prominent in "least mature" offenders which, she averred, could serve as a moderating variable in the assignment of I-level.

Werner (1972, 1975), a research associate with the California Youth Authority, utilized the California Psychological Inventory and developed a typology of offenders based upon computer cluster analysis. He compared the CPI types to I-level classifications that had been made by I-level staff via the clinical interview method and found a significant CPI/I-level typology congruency, as predicted. Other measures indicated there to be no significant interaction between I-level and race or ethnic status, while intelligence was found to have a positive, but low relationship to I-level classification.

Several dissertations have been located investigating the Interpersonal Maturity Level theory (Appendix A).

Zaidel (1970, 1973) examined whether any relationship could be found to exist between I-level designation and intelligence or affect awareness. Her analysis revealed that intelligence and I-level bore a significant and positive relationship which, in part, accounted for a race difference also noted. Further, offenders at differing I-levels were found to show varying degrees of attention to affect cues, specifically in their judgements of affect from facial expressions.

Miller, (1972) probed the empirical validity of the I-level system through comparison to the constructs of cognitive complexity, impulse control, foresight/planning ability, locus of control and internalized guilt. Her results revealed that I-level was positively related to cognitive complexity, impulse control and to future-time orientation, but not for the constructs of locus of control or internalized guilt. An ancillary finding also supported the positive relation between intelligence and I-level.

Lerner (1973) also examined the relation of I-level classification to the psychological constructs of cognitive complexity, impulsivity-

reflectivity, present-future time perspective and cheating behaviour. His results indicated, following his predictions, that I-level and cognitive complexity, and impulsivity-reflectivity were related, while no significant differences were found between cheating behaviour or present-future time perspective and I-level.

Gutierrez (1975) utilized a behavioural checklist with 285 male delinquent youths which was then factor analyzed in an attempt to reproduce the I-level classes and subclasses. His results revealed reproducibility for only one of the three I-level types. He interpreted his findings in terms of five distinct aspects of delinquent behaviour which, in large part, did not correspond to the theoretical distinctions provided for by I-level theory.

Barkwell (1976), in the only Canadian study located, researched the impact of differential treatment based upon the I-level diagnoses of adolescent probationers. As anticipated, all I-level groups responded much more favorably in contrast to a group of controls. They were significantly less recidivistic, had appreciably higher self-concepts as measured by the Tennessee Self-Concept Scale and were more gainfully employed at follow-up.

Finally, Austin (1977) illustrated through a multivariate statistical technique, that differential treatment, based upon I-level theory had a significant impact upon recidivism following the treatment intervention period. His study differed from others which had reported marginal I-level/parole outcome relationships.

Criticisms of Interpersonal Maturity Level Theory and Classification.

Several independent critical analyses of I-level classification have appeared, authored by Beker & Heyman (1972); Gibbons (1970); Lerman (1968, 1975); and Robison & Smith (1971). Each of these will be reviewed individually.

Gibbons' criticisms of the theory may be summarized in the following manner:

1. I-level theory posits that delinquents are usually at low(er) levels of interpersonal maturity and that their lawbreaking is directly related to their immaturity; presumably nonoffenders are considered to possess higher interpersonal maturity, which then accounts for their conformist behaviour. Gibbons remarks that such a hypothesis is purely speculative, and has not been supported through empirical research. Evidence indicating that non-offenders are not higher in maturity would then call into question the conceptual foundations of the theory.
2. Gibbons proposes that there may, in fact, be personality correlates of delinquency which differentiate offenders from non-delinquents, but may prove to be different from that proposed by I-level theory.
3. I-level theory does not consider the "hidden delinquent". By implication, it would seem that I-level theorists would predict such an individual to be higher in interpersonal maturity than his identified--and incarcerated-counterparts. There has been no research to test this. Additionally, the validity of the theory is suspect if hidden delinquents and non-delinquents would be found to possess a negligible difference in interpersonal maturity level. How might one then account for the fact that some are ostensibly insulated from delinquency while others indulge in discrete offense behaviour?
4. Gibbons cites studies which indicate that delinquents do not differ in personality traits as measured, for example, by tests such as the MMPI. Further, he points out research by the Gluecks' which has shown, in one large-scale piece of research, that non-offenders were considerably more neurotic than the delinquent offenders, an empirical observation which is contradictory to that which is predicted by I-level theory.
5. Finally, while Gibbons credits the theory as a sophisticated, even "elegant" framework, he questions whether it may not be so complex and cumbersome in operation that it could not possibly be implemented on a broad state-wide or nation-wide basis.

Lerman (1968) took aim at the findings of the Community Treatment Project which, up to that time, had submitted very encouraging progress reports on parole success of their "treated experimentals", in contrast to the institutionalized controls. Lerman charged that the researchers, who also happened to be the parole agents supervising the youth, were

introducing a systematic source of error as there appeared to be considerably more temporary parole revocations for relatively minor offenses for the I-level experimentals, while the controls were not apprehended until a major offense had occurred (and then parole revocation was followed by reinstitutionalization). Noting that statistics only show that more experimentals were still in the community at follow-up as compared to the controls, Lerman charged that there may have been markedly altered correctional practices introduced into the project by the parole agents/investigators to account for these differences.

Robison and Smith (1971) also investigated the findings of the Community Treatment Project which had shown that treated experimentals were functioning more effectively within the community after treatment than a comparable group of untreated and previously institutionalized controls. They suggested that there were irregularities in the handling of parole violators which seriously influenced the recidivism rates of their wards. Their analysis shows that while two of three control failures were accounted for by the category of Parole Agent Casework Decision, slightly less than one of three of the experimental failures were accounted for by this same category. They suggested that Experimentals were judged similarly to the Controls only when the offenses committed were of high severity. They concluded that the experimental group was in fact, no less delinquent in their behaviour than the controls and that they had committed more "known" delinquent offenses (2.81 per experimental boy; 1.61 per control boy). They opined that the investigators' ideological belief in the effectiveness of the community treatment method altered the experimental results. They further charged that assignment to treatment was not random as the investigators had originally

intended. It was noted that the Youth Authority screened out from participation in CTP those offenders who had committed delinquent and criminal acts which were deemed to be of a very serious nature (rape, murder, heroin and related narcotic drug trafficking) or were likely to create a very adverse public reaction should it be known that such offenders were "free" within the community.

Cross & Tracy's (1971) study was among the first to point to a significant racial treatment effect. Their study included examination of the following psychological variables: internal-external locus of control, future time perspective, intelligence, and guilt, as well as demographic variables such as age, socioeconomic status and legal (offender) status.

When the data were analysed with respect to race, it was revealed that the interpersonally-mature blacks were more external, had a shorter time perspective, while the opposite was true for the white "mature" subjects. This contradicted I-level theory expectations. The authors conjectured that these results are seen in blacks who, as they acquire interpersonal maturity, come to realize the discriminatory availability of social rewards and thereby develop an expectation that such rewards will be withheld from them in the larger society. Supposedly such maturity has a damaging effect upon the black offender.

Beker & Heyman (1972) examined the Differential Treatment Model, and in their analysis of the reliability of clinical assignment to level and subtype, charged that the I-level proponents were seriously contaminating their ratings through a failure to conduct completely blind ratings. I-level classification reliability had been reported to be of the order of .9 for level by a group of independent raters using

Warren's (1966) clinical interview method. Beker and Heyman called for empirical research into the construct validity of interpersonal maturity, and emphasized the need for the study of the relationship between I-level and various social psychological factors which might help to clarify its conceptual meaning.

Lerman (1975) once again investigated the impact of the Community Treatment Project upon juvenile corrections in California. His research into the 14 year-old program which had completed three unique research phases, had indicated the cost the State of California and the National Institute of Mental Health to be excessive. It appeared that the positive benefit of community diversion of offenders had disappeared by the 1970s. Funding for the Community Treatment Project was discontinued in 1975 by both sponsoring agencies and the program ceased thereafter. As Lerman notes, the cost per child of differential treatment based upon the I-level model each year cost more than a comparable control placed into an institution. Further, while initial results revealed that treated offenders functioned better upon release, long-term follow-up indicated that: (i) the rate of delinquency and parole revocation did not differ after two years and (ii) the severity of offense behaviour resulting in parole revocation did not differ either.

It would appear then that the CTP was doomed when its additional costs were not offset by a significant decrement in long-term post-release offense behaviour. While many county probation departments throughout the State of California had adopted the I-level system or some facsimile thereof, the largest of these, the Los Angeles County Probation Department, after considering the possibility of incorporating I-level theory and practices within its program, in 1970 rejected it for the following administrative reasons:

- a. Excessive staff training investment--80 hours would be required to train DPO's (Department Probation Officers) in the application of I-level diagnosis and treatment strategies. The number of trainers would be excessive and would require that a major training and re-training program be maintained indefinitely.
- b. Impractical caseload size--Many of the CYA I-level case-loads consist of about 12 juveniles. We cannot afford this.
- c. Inconclusive experimental results....
- d. Staff assignment problems--Thoroughgoing application of I-level method requires that the caseworker be "matched" with his clients. In a county as large as Los Angeles with emphatic geographic assignment preferences of staff members, I-level matching and its accompanying transfer requirements would create significant morale problems.
- e. Differential effectiveness according to race--I-level researchers see indications that the method can be more reliably applied to white clients than black clients. Any methods with such selective applicability would probably pose more problems than it was worth in Los Angeles.
- f. Unclear treatment strategies--The I-level approach provides a highly refined classification method but the treatment strategy prescribed for these various classifications of clients are not so specific. The empirical validation of these approaches with all types of offenders (treatments times offenders interaction) has yet to be conducted.
- g. Treatment resources--Youth Authority Community Programs which have used I-level have also relied upon therapeutic detention. Los Angeles has no room nor program which provides for such alternatives and does not anticipate the development of one. (County of Los Angeles, 1970)

Cognitive Development. Piaget's cognitive developmental analysis of how children reason has led to the charting of three broad classes: the Preoperational level (Stage I); the Concrete Operational level (Stage II); and the Formal Operational level (Stage III). Piaget has further subdivided each level into two substages which characterize preparatory, and achievement or consolidation phases for each operational class.

Stage I reasoners focus upon perceptually salient features in a task usually ignoring and transformations taking place, and concentrate instead upon momentary states of each system. Stage I children fail to see transformations as reversible.

Stage II reasoners are more likely than those in Stage I to focus upon transformations and are less likely to be concerned with momentary perceptual configurations. They recognize that various transformations are reversible. Stage II children are deficient though, in that the range of information which they are capable of assimilating and retaining is limited. They more commonly focus upon actual transformations as opposed to potential ones. As well, there are limits to which Concrete-Operational children generalize a newly learned relationship. Piaget also asserts that Stage II children do not demonstrate an integrated, systematic and organized conceptual reasoning pattern. Horizontal décalage is apparent, for example, in the integration of conservation principles at the Concrete-Operational stage.

At Stage III, adolescents become capable of solving propositional operations. They are capable of assimilating and retaining a much broader range of information and they also take into active consideration potential as well as actual transformations. They evidence an expanded capacity to generalize from specific to new situations and their thinking is considered to be highly interconnected and systematically structured (Brainerd, 1978, Inhelder & Piaget, 1958).

While evidence of Formal Operational thinking first appears around 11 to 12 years of age, Piaget has proposed that a lengthy transitional or "preparatory" phase occurs and that formal operations do not become firmly established until age 15. Presumably then, between the ages of

11 and 15, subjects will tend to behave as though they were Formal-Operational in some situations and Concrete-Operational in other situations. After the age of 15 however, when Formal Operations are in full control, behaviour is expected to become more consistent and regulated.

During the Formal-Operational transitional phase, new features of intelligence emerge: hypothetico-deductive reasoning, and reflective-abstraction. Hypothetico-deductive reasoning refers to any form of thought that goes beyond the confines of everyday experience to things of which persons have no experience; it extends beyond the boundaries of both perception and memory. Language is considered to play a central role in hypothetico-deductive reasoning to the extent, Piaget asserts, that such reasoning could not be possible were it not for the capacity to pose questions verbally.

Concrete-Operational thinking is assumed to operate exclusively on the hard data of sensation and perception, and Concrete-Operational children gain no information through internal reflection. Such operations are termed "first order". "Second order" mental operations involve generalizations and extrapolation of rules that cannot be and have not been directly observed. Where Concrete Operations consist solely of thought thinking about the environment, Formal Operations consist of thought thinking about itself (Brainerd, 1978). Two common differentiations made between the formal and concrete levels include the coordination of reversibility rules and the ability to represent potential actions as opposed to real ones.

Two modes of formal thought include propositional operations, or propositional logic, and formal-operational schemes. Propositional logic is defined as logic which satisfies three conditions: (a) there

are two or more factors or variables in a system, (b) each factor can take on two discrete values, and (c) all combinations of these factors take on the same two values. Piaget asserts that adolescents are capable of propositional logic and he has organized propositional operations into a system of 16 quasi-mathematical functions termed the Sixteen Binary Operations (Inhelder & Piaget, 1958).

A key difference between propositional logic and formal-operational schemes lies in degree of specialization. Formal-operational schemes are adapted to the demands of certain forms of information from the environment while propositional logical operations are more general and applicable to all forms of information. While propositional logic pervades all areas of adolescent and adult thought, formal-operational schemes do not. They only come into play when certain specific reasoning situations call them forth. Formal-operational schemes appear to be closely related to the formulation of scientific laws (Brainerd, 1978).

Considerable research interest has been shown in the study of proportionalities within the Formal Operational stage. One method of investigating the development of proportionality requires the solution to a series of verbal and numerical analogies. Lunzer has maintained that the concept of proportion demarcates formal thought processes within the adolescent period and his (1965) analogy test entitled How Clearly Can You Think? examined Formal Operations as second-order relations based upon this assumption. He prepared 20 verbal analogies, 10 numerical proportions and 10 numerical series problems and found a consistently sharp rise in children's ability to correctly solve these problems after the age of 10 to 11 years.

In assessing 153 subjects in an age range considered transitional

between Concrete and Formal Operational levels, he reaffirmed Piaget's belief that youngsters do not comprehend the notion of proportionality until they reach the Formal Operational period. On Lunzer's verbal analogies tests, subjects 9 years of age--in the mid-Concrete Operational period--passed only 22% of the items, on average. For other age levels, 33% of 10 year olds passed; 51% of 11 year olds; 57% of 12 year olds; 67% of 13 year olds; 68% of 14 year olds; 77% of 15 year olds; 75% of 16 year olds; and 83% of 17 year olds. The age at which subjects passed half of the items corresponds to the approximate nominal age at which the onset of Formal Operational thinking is first apparent.

On the numerical analogies test, subjects within the middle Concrete-Operational stage passed only 19% of the items while the percentages for other age levels were: 23% (10 year olds), 48% (11 year olds), 46% (12 year olds), 67% (13 year olds), 63% (14 year olds), 76% (15 year olds), 76% (16 year olds), and 79% (17 year olds).

Lovell (1968) replicated the general trends seen in Lunzer's 1965 study. In testing students within the age ranges from 9 to 15 years, he found that subjects whose chronological age placed them within the middle of the Concrete-Operational stage did not perform very well on the analogies.

Possibly due to a lack of norms and standardization, Lunzer's analogy test has not stimulated much research. Recently, however, Gallagher (1978) has advocated searching for new methods of identifying formal thinking and avers that tests of analogy and metaphor offer considerable promise in elaborating this stage of conceptual reasoning.

While Inhelder and Piaget (1958) delineated two substages within

the stage of Formal Operations--the early and the consolidated phases--more recently Colby and Kohlberg (1975) have identified a further transitional phase which has been termed the beginning formal phase based upon Piaget's earliest (1924, 1928) descriptions of the Formal Operational level. Colby and Kohlberg place the beginning formal phase in the developmental sequence between Concrete Operational thought and early Formal Operational thought.

Beginning Formal Operations are characterized by the coordination of the principles of Reciprocity, Inversion, Negation and Correlation with coordination of these in such a way that the form of reasoning as required in proportionality problems, for example, becomes possible. Tasks which have been employed to assess beginning formal thought have included tasks of verbal seriation, logical absurdities, verbal class inclusion and conservation (Colby & Kohlberg, 1975; Walker & Richards, 1979). Typically, empirical evidence shows that beginning formal thought may be seen as early as 10 years while basic formal or "consolidated" thought is usually seen at 15 to 16 years. Research conducted by Fritz (1974) confirmed the presence of a beginning transitional formal stage between the Concrete Operational and early basic formal stages.

Stimulating logical development. Brainerd (1971) and Brainerd & Allen (1971) have investigated the trainability of proportionality schemes. Brainerd (1971) prepared exercises intended to promote conservation principles in third, sixth and ninth graders. It was concluded that 47% of third-graders learned the density conservation principle; many sixth graders were already knowledgeable, but also evidenced experimentally induced learning, while the ninth graders all knew the principle involved.

Brainerd & Allen (1971) tested fifth graders on density and volume

conservation tasks finding, in pretest, that subjects performed poorly. Following training sessions in these principles, "marked improvement" was reported in post-test conservation assessment.

Tomlinson-Keasey (1972) investigated the extent to which adult females displayed Formal Operational thinking. Utilizing several Piagetian physics tasks of formal reasoning (Inhelder & Piaget, 1958) she found on pretest that only 32% of 12 year old girls, 67% of college coeds (average age, 19 years) and 54% of mature adult women (average age, 54 years) evidenced Formal Operational thought. Intervention procedures designed to promote Formal Operational cognition resulted in significant increases, at post-test, for all groups in their percentages of formal reasoning.

Moral Development. One of the cognitive characteristics of the Preoperational child is an inability to separate the physical world from his own motivation. In the area of morality, this cognitive inability is reflected in the child's resolution of moral dilemmas. Typically, he focuses upon physical and concrete aspects such as whether or not a falsehood was a "big lie" or a "little lie" or upon the extent of physical damage that may have been done. Children who reason in this manner have been termed moral realists in a heteronomous phase of moral development (Piaget, 1965).

During the Concrete Operational period a child begins to separate subjective and objective properties from his own actions and proceeds to work through various ways in which objects are related. As a result, moral judgements focus less upon solely physical aspects and moral dilemmas are more often examined in terms of other peoples' reactions and personal desires.

Not until the Formal Operational period are persons logically capable of the reversibility and flexibility necessary to use thought processes to coordinate facts and generate hypotheses. Logical operations at this stage are characterized by a consideration of all possibilities and the ability to consider all the alternatives and to evaluate them is reflected in the moral domain through a reluctance to accept the moral norm as the only possibility.

Kohlberg (1976) and Kuhn, Langer, Kohlberg & Haan (1977) suggest that comparatively few adolescents and adults are to be found at the stage of Concrete Operations, but that many will be at the lower stages of Formal Operations, while most will be at the highest (consolidated) stage of Formal Operations.

Kohlberg (1969) and Piaget & Inhelder (1969) view moral development as an outgrowth of the interaction of cognitive development and social experience. Piaget's concept of structural parallelism or structure d'ensemble implies that structural transformations in the cognitive domain cause children to redefine some of their social and moral perspectives. Presumably, there is a parallel between an individual's logical stage and his moral stage. In Kohlberg's view, a person whose logical stage is only Concrete Operational is limited to the Preconventional moral stages: Stages 1 and 2, while a person whose logical stage is only "low" Formal Operational is limited to the Conventional moral stages: Stages 3 and 4. While logical development is a necessary condition for moral development it is not in itself sufficient for moral advance. Persons at the highest stage of logical thinking may not all be at the highest stage of moral reasoning (Colby & Kohlberg, 1975) (Table 3). Keasey's (1975) research, confirms the requisite involvement of Formal Operational thought in the emergence of principled moral reasoning.

TABLE 3

Relation Between Piaget's Cognitive Stages
and Kohlberg's Moral Stages

<u>Cognitive Stage</u>	<u>Moral Stage</u>
	<u>Preconventional</u>
(Not specified)	Stage 1 (heteronomy)
Concrete operations	Stage 2 (mutual exchange)
	<u>Conventional</u>
Beginning formal operations	Stage 3 (expectations)
Early basic formal operations	Stage 4 (social system)
	<u>Postconventional</u>
Consolidated basic formal operations	Stage 5 (social contract)
(Not specified)	Stage 6 (universal principles).

(Colby & Kohlberg, 1975)

Piaget and Kohlberg view their stages as forming an invariant sequence where each stage represents qualitatively different modes of thought. Consequently, an individual must pass through each preceding stage in the sequence in order to progress to the next stage. The issue of sequential invariance has stimulated considerable attention. While research so far has validated Piaget's model (Hoffman, 1970), support for Kohlberg's sequence has been mixed and criticisms of his model are well known (Kurtines & Grief, 1974; Peters, undated; Phillips & Kelly, 1975 and Simpson, 1974).

Moral development research. Kohlberg has presented data which demonstrates that the existence of his six-stage sequence of moral reasoning occurs across a variety of moral issues including interpersonal obligation, value of human life, law, social order and punitive justice. This developmental progression has been validated across cultures and Kohlberg proposes that socio-cultural and environmental determinants may accelerate, impede or even arrest the rate of moral development (Blatt & Kohlberg, 1975; Kramer, 1968; Turiel, 1973). Supposedly, arrest in Preconventional stages of moral development is related to social adjustment. Kohlberg found for example (1958), that delinquent boys all of whom had histories of antisocial behaviour, consistently used Preconventional levels of moral reasoning in contrast to the more mature judgements of control subjects. Kohlberg attributed the delinquents' developmental arrest to experiential factors citing arbitrary parental decisions and inconsistent and frustrating child rearing practices.

Clinical evidence for the hypothesis that Preconventional moral development is associated with overt antisocial behaviour is seen in the researches of Campagna & Harter (1975), Cleckley (1959), Fodor (1972,

1973), Hudgins & Prentice (1973), Jurkovic & Prentice (1974), McCord & McCord (1964), and Ruma & Mosher (1967).

Campagna and Harter compared the moral reasoning of sociopathic adolescents with "normals" and, controlling for age and I.Q., found the antisocial group to be solidly at Stage 2 (Preconventional) reasoning morally, while the control group was in a transitional phase 2(3) or 3(2) as measured by Kohlberg's Moral Judgement Scale.

In related studies into disturbed (psychopathic and nonpsychopathic) delinquent adolescents, Fodor (1972;1973) and Ruma & Mosher (1967) have shown that incarcerated delinquent boys typically score within Pre-conventional moral stages on the Kohlberg moral maturity measure. This was due, in these authors' opinion, to a greater amoral, and self-centered orientation toward other people.

Tomlinson-Keasey and Keasey (1974) investigated the role of cognitive growth in resolving moral dilemmas. They assessed 30 sixth grade girls who had just begun to acquire Formal Operational thought and 24 college coeds assumed to be practiced in formal thought. The authors reported high correlations and systematic relationships between Kohlbergian stages of moral reasoning and the stages of cognitive operations, concluding that sophisticated cognitive operations are prerequisite to advanced moral judgements. They also reported a lag, or *décalage*, between the acquisition of logical operations, (especially formal thought) and their application to the area of morality.

Tomlinson-Keasey and Keasey's results supported the contention made by other investigators that cognitive development is positively related to moral development and that changes which appear in affective and social functioning may be viewed as sequelae to qualitative changes in

logical development (Blanchard & Price, 1971; Cavior & Lombardi, 1973; Lee, 1971; Kuhn, Langer, Kohlberg & Haan, 1977; McGhee, 1971; Miller, Kessel & Flavell, 1970).

Walker and Richards (1979), assuming that certain cognitive stages are necessary for corresponding moral stages, investigated whether moral reasoning development could be experimentally induced for persons who possess the cognitive requisites for, but delays in, advanced moral judgments. They tested the hypothesis that moral Stage 3 adolescents who have achieved basic Formal Operations are more susceptible to attempts to stimulate more mature moral reasoning than moral Stage 3 adolescents who have achieved only beginning Formal Operations. The authors found that cognitive developmental level was an important variable in attempts to stimulate moral reasoning development. Their findings suggested that the attainment of basic Formal Operations in cognitive development was, in fact, necessary in making the transition from moral Stage 3 to moral Stage 4 reasoning.

Tracy & Cross (1973) examined possible antecedents to experimentally-induced shifts in moral thinking in seventh grade boys. They found that subjects at Preconventional moral levels increased significantly toward Conventional modes of moral reasoning while shifts from lower Conventional stage to higher Conventional stage were seen less often. The authors concluded that a "ceiling effect" may have influenced shift in morality scores for the Conventional moral groups. Their research supports the findings of other studies (Arbuthnot, 1975; Keasey, 1973) which show that lower stage subjects are more amenable to attempts at artificially induced transitions in moral reasoning. One explanation for this has been that lower moral stage subjects in this particular age group are more likely to have

the necessary cognitive prerequisites for transitions than age-matched stage subjects--who are less likely to have the high level of cognitive development (consolidated Formal Operations) that would be necessary for further advance to the next highest (Postconventional) moral stage.

Social perspective-taking. The importance of role-taking in social interactions has been a prominent consideration in the writings of James Mark Baldwin (1906), McDougall (1908) and George Herbert Mead (1934) where, in dyadic or interpersonal exchanges, the ability to consider another's point of view as both distinct from, and yet related to, one's own viewpoint is often seen as the crux of social intelligence. This capability, referred to as social role-taking or social perspective-taking, does not function in infancy, but progresses in qualitatively different ways throughout childhood and into adulthood.

Role-taking has been defined by Flavell, Botkin, Fry, Wright & Jarvis (1968) as the ability "to understand the interaction between the self and another as seen through the other's eyes" and implies an ability to make specific inferences about another's capabilities, attributes, expectations, feelings and potential reactions. The cognitive processing component in role-taking is seen in the necessity to attend, shift, balance and evaluate both perceptually and conceptually. Levels of social perspective-taking describe changing ways in which persons understand complexities in relations between self and other. Developmental reciprocal role-taking ability implies an increasingly accurate perception of what another will do in a given situation and specifically of how one's own actions will affect the attitude of another toward oneself (Table 4).

The process of learning to view the social world from the perspective of another has frequently been considered a central condition in

TABLE 4

Descriptive and Symbolic Representation
of Social Perspective-Taking Levels

Level	Symbolic	Descriptive
0	$S \leftrightarrow X = O \leftrightarrow X$	Egocentric perspective taking: Although the child can identify simple emotions in other people, he or she often confuses other's perspective with his or her own. He or she does not realize others may see things differently.
1	$S \rightarrow O \leftrightarrow X$	Subjective perspective taking: Child begins to understand that other people's thoughts and feelings may be the same or different from his or hers. He or she realizes that people feel differently or think differently because they are in different situations or have different information.
2	$S \rightarrow (O \rightarrow S)$ or $S \rightarrow (S \rightarrow O)$	Self-reflective perspective taking: The child is able to reflect on his or her own thoughts and feelings. He or she can anticipate others' perspective on his or her own thoughts and feelings and realize that this influences his or her perspective on other.
3	$S \rightarrow (O \leftrightarrow S)$	Mutual perspective taking: The child can assume a third-person point of view. He or she realizes that in a two-person interaction each can put her or himself in the other's place and view her or himself from that vantage point before deciding how to react.

the development of socio-moral concepts. For example, Piaget (1932) proposed that a child could not manifest autonomous morality until he had begun to decenter his point of view to include the perspectives of others. Prior to this initial decentering, a child could not conceive of differing intentions behind actions or of the potential subjective and arbitrary nature of rules and regulations.

In the advance of moral thoughts, Kohlberg (1976) assigns central importance not only to logical development but to role-taking abilities as well. Kohlberg posits that the manner in which an individual sees other people, interprets their thoughts and feelings and sees their place in society will be related, in a general way, to his concomitant moral functioning. To Kohlberg, role-taking levels do not restrict themselves to issues of "fairness" or to choices of right and wrong as moral levels do, but to abilities to see the world in different ways at different levels. Kohlberg proposes that, as with logic, the advance in social-perceptual levels precedes the development of parallel stages of moral development.

Kohlberg strongly emphasized the general hypothesis that higher levels of moral thought require the ability to take the role of another. According to his theory, the cognitive characteristics of the Conventional level of morality which usually replaces the less structured Preconventional level at some time during the ages from 9 to 13 are: moral stereotyping, empathic goal definition, sensitivity to and self-guidance by anticipated approval or disapproval of others, and the identification with authority and its goals (1976).

The Conventional moral level, especially Stage 3, is only achieved when the child's conception of socio-moral interaction is constructed so

as to focus on the effect of one's actions on another's subsequent reactions. Apparently the reciprocity evident in Selman's Mutual Level of role-taking (Level 3) is a necessary component of this social perspective. The Preconventional moral stages entail the use of role-taking skills which are less integrated, stable, and permanent in nature than the reciprocal role-taking skills used at the Conventional level of moral thought. At Preconventional moral Stage 2 for example, the child's moral conceptions are characteristically quid pro quo. Reciprocity is less differentiated in that moral judgements at this level do not consider justifications based upon mutual understanding of different views. The moral Stage 3 child however, places a natural emphasis upon the interpersonal aspects of any moral situation. Here, concern shifts from what will happen to him to what others will think of him. Preceding developments in a child's reciprocal role-taking ability are very significant and involve the realization that others are making judgements on the basis of his own actions and intentions just as he is cognizant of others' intentions and actions (Table 5).

Just as there is a vertical sequence of steps in the movement from moral Stage 1 to moral Stage 2, to moral Stage 3, so there is a horizontal sequence of steps in the movement from logical development to social perception to moral judgement:

First, a person attains a logical stage, say, partial formal operations, which allows him to see 'systems' in the world, to see a set of related variables as a system. Next, he attains a level of social perception or role-taking, where he sees other people understanding one another in terms of the place of each in the system. Finally he attains Stage 4 of moral judgement, where the welfare and order of the total social system or society is the reference point for judging 'fair' or 'right' (Kohlberg, 1976, p. 32).

Role-taking research. Over a period of years, role-taking has been studied from differing theoretical positions. Some research has shown

TABLE 5

Parallel Structured Relations between Social
Role-Taking and Moral Judgment Stages

Social Role-Taking Stage	Moral Judgment Stage
<p>Stage 0 - Egocentric Viewpoint (Age Range 3-6)</p> <p>Child has a sense of differentiation of self and other but fails to distinguish between the social perspective (thoughts, feelings) of other and self. Child can label other's overt feelings but does not see the cause and effect relation of reasons to social actions.</p>	<p>Stage 0-Premoral Stage</p> <p>Judgments of right and wrong are based on good or bad consequences and not on intentions. Moral choices derive from the subject's wishes that good things happen to self. Child's reasons for his choices, rather than attempting to justify them.</p>
<p>Stage 1-Social-Informational Role Taking (Age Range 6-8)</p> <p>Child is aware that other has a social perspective based on other's own reasoning, which may or may not be similar to child's. However, child tends to focus on one perspective rather than coordinating viewpoints.</p>	<p>Stage 1 - Punishment and Obedience Orientation</p> <p>Child focuses on one perspective, that of the authority or the powerful. However, child understands that good actions are based on good intentions. Beginning sense of fairness as equality of acts.</p>
<p>Stage 2-Self-Reflective Role Taking (Age Range 8-10)</p> <p>Child is conscious that each individual is aware of the other's perspective and that this awareness influences self and other's view of each other. Putting self in other's place is a way of judging his intentions, purposes, and actions. Child can form a coordinated chain of perspectives, but cannot yet abstract from this process to the level of simultaneous mutuality.</p>	<p>Stage 2-Instrumental Orientation</p> <p>Moral reciprocity is conceived as the equal exchange of the intent of two persons in relation to one another. If someone has a mean intention toward self, it is right for self to act in kind. Right defined as what is valued by self.</p>

(cont'd)

Social Role-Taking Stage	Moral Judgment Stage
<p>Stage 3 - Mutual Role Taking (Age Range 10-12)</p> <p>Child realizes that both self and other can view each other mutually and simultaneously as subjects. Child can step outside the two-person dyad and view the interaction from third-person perspective.</p>	<p>Stage 3 - Orientation to Maintaining Mutual Expectations</p> <p>Right is defined as the Golden Rule: Do unto others as you would have others do unto you. Child considers all points of view and reflects on each person's motives in an effort to reach agreement among all participants.</p>
<p>Stage 4 - Social and Conventional System Role-Taking (Age Range 12 - 15+)</p> <p>Person realizes mutual perspective taking does not always lead to complete understanding. Social conventions are seen as necessary because they are understood by all members of the group (the generalized other) regardless of their position, role, or experience.</p>	<p>Stage 4 - Orientation to Society's Perspective</p> <p>Right is defined in terms of the perspective of the generalized other or the majority. Person considers consequences of actions for the group or society. Orientation to maintenance of social morality and social order.</p>

(Selman, 1976)

that role-taking ability and accuracy of social perception improve with age (Ausubel, 1952; Feffer and Gourevitch, 1960). Other data shows that such development continues well into adolescence (Flavell, et al 1968; Moore, 1958; Taft, 1955), while still other evidence indicates that role-taking is highly correlated with psychometric measures of intelligence (DeVries, 1970; Neale, 1966), and with emotional balance (Chandler, 1971).

Selman (1971) investigated the relationship of role-taking to moral reasoning. Testing middle-class children and controlling for intelligence, Selman concluded that the development of Reciprocal role-taking skills was positively related to the development of Conventional moral judgement. Selman further proposed that the ability to understand the reciprocal nature of interpersonal relations is a necessary--but not sufficient--condition for the development of Conventional moral thought. Related research into social-cognition and moral thought (Dilling, 1967; Hardeman, 1967; Stuart, 1967) has similarly shown that progress toward Conventional levels of moral reasoning is associated with a more decentered and reciprocal social perspective.

Holstein (1968) has proposed that the influence of parental figures in promoting and encouraging dialogue on value issues is a most important determinant of moral advance in children. Inhibition of this exchange of attitudes and viewpoints serves to impede moral growth. Kohlberg cites the evidence of American orphanages which lack parental interaction, and display generally poor communication patterns with minimal opportunity for role-taking between adult staff and children. He maintains that deficiencies in role-taking opportunities result in delayed moral judgement and that orphanage adolescents are in fact observed to be retarded in both role-taking and moral stage in relation to their non-institutionalized counterparts.

Keasey (1971) examined the relationship of social participation to level of moral development, asserting that level of moral judgement would be positively associated with extent of social participation--congruent with Kohlberg's claim that social interaction is an important source of disequilibrium facilitating progression to upper levels of moral reasoning. Keasey found, among a group of adolescent males and females, that social participation was strongly associated with moral stage; the association appeared strongest for adolescent boys.

Owing to the importance of perspective-taking skills in the moral socialization process, a number of researchers have investigated the relationship between delays in the acquisition of these skills and the appearance of various forms of social deviation (Anthony, 1959; Chandler, 1972, 1973; Feffer, 1970; Gough, 1948; Martin, 1968; Sarbin, 1954 and Thompson, 1968). These studies show that prosocial behaviour is linked to the development of age-appropriate social perspective-taking skills. Persistent egocentric thought is associated with a variety of forms of deviancy. Presumably, persons demonstrating developmental delays in the acquisition of role-taking skills systematically misread societal expectations, commonly misinterpret the actions and intentions of others and tend to act in ways which often are judged to be callous and disrespectful of the rights of others (Chandler, 1973).

In a study of young male delinquents, (Hickey, 1972) found role-taking ability in many subjects to be above their moral reasoning levels--by as much as two complete stages. Evidently while subjects possessed a mature conception of the manner in which the social world operated, they possessed a retarded sense of what it should be like.

Chandler (1973) after having shown that a significant delay in

role-taking did, in fact, occur in delinquent subjects in relation to a group of non-delinquent controls, conducted a study which attempted to remediate deficits in the role-taking abilities of 45 chronically delinquent delinquent boys. Following role-taking training sessions with the delinquents, results indicated that the subjects in the experimental group increased significantly in their role-taking ability. At 18 months follow-up, these improvements were seen to be associated with significant reductions in delinquent behaviour.

While Chandler has found that delinquents are generally impaired in their capacity for role-taking as opposed to non-offending controls, Jurkovic & Prentice (1977) examined whether adolescent psychopathic, neurotic and subcultural delinquents differed in their logical, moral and role-taking abilities. Cognitive development assessment was based upon three Piagetian physics tasks; role-taking, upon Flavell's (1968) methodology; and moral reasoning upon Kohlberg's Moral Judgement Scale. Their findings indicated that psychopathic delinquents were more immature in level of moral development than all other groups (including an adolescent control group)--who did not differ significantly from one another. Psychopathic delinquents, further, were shown to be more concrete in their thinking on cognitive tasks than all other groups (who exhibited signs of early Formal Operational thought). Psychopathic, and to a lesser extent neurotic delinquents, were also seen as deficient in relation to comparable control adolescents and subcultural delinquents in role-taking abilities.

In summary, role-taking research supports the belief in the relation of role-taking and moral judgement and the assumption that role-taking is an important mediating influence upon advancement to higher moral

stages (Giraldo, 1972; Hickey, 1972; Moir, 1974; Selman, 1971 et passim; Thrower, 1972; Tomlinson-Keasey & Keasey, 1974). This research shows also, that while a given level of moral reasoning may imply a given level of social perspective-taking, the reverse need not be true. Each perspective-taking level is seen as a necessary, but not sufficient condition for its parallel in the moral reasoning domain.

Research hypotheses

Based upon the findings of previous research, and following from the stage descriptions of the various developmental concepts of Interpersonal Maturity, logical, moral and social development, nine distinct directional hypotheses have been advanced, grouped into three hypothesis sets.

Hypothesis Set 1 projects the relation of Delinquents to Non-Delinquents across the developmental variables; the results of the analyses to be examined in light of previous research findings:

- 1.0 Delinquents, in relation to Non-Delinquents, will score lower in the extent to which they demonstrate Piagetian Formal Operational thinking, as measured by a 25-item, multiple-choice, formal operations test battery.
- 1.1 Delinquents, in relation to Non-Delinquents, will score lower in level of moral judgement and reasoning--specifically that they will neither comprehend nor endorse principled moral statements as frequently as Non-Delinquent control subjects as measured by Rest's Defining Issues Test (1979b).
- 1.2 Delinquents, in relation to Non-Delinquents, will display a more egocentric and non-reciprocal social perspective-

taking level as measured by Selman's (Selman & Byrne, 1971) developmental scale.

Hypothesis Set 2 examines the interrelation of principal developmental variables:

- 2.0 Level of cognitive development, as measured by a 25-item, multiple-choice formal operations test battery is positively related to level of moral development as measured by Rest's Defining Issues Test--specifically that degree of formal operational thinking will be positively correlated with degree of principled moral reasoning.
- 2.1 Level of cognitive development, as measured by a 25-item, multiple-choice formal operations test battery is positively related to social perspective-taking ability as measured by Selman's developmental scale--specifically that degree of formal operational thinking will be positively correlated with degree of reciprocal perspective-taking ability.
- 2.2 Level of moral development, as measured by Rest's Defining Issues Test is positively related to social perspective-taking ability as measured by Selman's developmental scale--specifically that the degree of principled moral reasoning will be positively correlated with degree of reciprocal social perspective-taking ability.

Hypothesis Set 3 which comprises the major test of this study, examines the relation of Interpersonal Maturity of delinquents at

various I-levels to the constructs of logical, moral and role-taking development:

- 3.0 Delinquents at each of the Interpersonal Maturity levels, as measured by Jesness' Sequential I-level classification system, will be found to differ significantly in Piagetian cognitive development, as measured by a 25-item multiple-choice formal operations test battery--specifically that delinquents possessing higher levels of Interpersonal Maturity will be found more often, to display formal cognitive operations than delinquents at lower Interpersonal Maturity levels.
- 3.1 Delinquents at each of the Interpersonal Maturity levels as measured by Jesness' Sequential I-level classification system, will be found to differ significantly in level of moral judgement development, as measured by Rest's Defining Issues Test--specifically that delinquents possessing higher Interpersonal Maturity will comprehend and endorse a significantly greater number of principled moral issue statements than delinquents at lower Interpersonal Maturity levels.
- 3.2 Delinquents at each of the Interpersonal Maturity levels, as measured by Jesness' Sequential I-level classification system, will be found to differ significantly in social perspective-taking ability as measured by Selman's developmental scale--specifically that delinquents functioning at higher levels of Interpersonal Maturity will be shown

to exhibit a more differentiated, and reciprocal perspective-taking ability than delinquents at lower Interpersonal Maturity levels.

CHAPTER III

Procedure and Design

General Description

In order to test the hypotheses, a study was proposed to contrast an adolescent Delinquent group with a Non-Delinquent adolescent control group. The data to be acquired for both of these samples was to include information regarding extent of Piagetian Formal Operational thought, principled moral judgement and reasoning and reciprocal role-taking ability. Identification of Interpersonal Maturity level and elaboration of individual personality traits for each of the research subjects was made available through a computer-derived I-level classification procedure. This procedure also allowed for the formulation of prototypic personality sketches coexisting for adolescents at differing I-levels.

The problem of delinquent identification

In the identification of persons who may qualify for participation in a delinquency research study, reference to the criteria for categorizing offenders as juvenile delinquents must be made. In this context it is seen that the criteria for such a categorization are not wholly accepted by all persons working with and for troubled youths. Juvenile Delinquency is often viewed as a legal term which focuses upon the behavioural act of the protagonist to be of principal, if not exclusive, importance (Roebuck, 1967). Contravention of the provisions of the justice system as the sole criterion of juvenile delinquency is reflected in the Juvenile Delinquents Act of Canada (Revised Statutes of Canada, 1970) which, by federal statute declares that a:

...'juvenile delinquent' means any child who violates any provision of the Criminal Code or of any federal or provincial statute or of any law or ordinance of any municipality, or who is guilty of sexual immorality or any similar form of vice, or who is liable by reason of any other act to be committed to an industrial school or juvenile reformatory under any federal or provincial statute. (Ch. J-3)

In this legal definition, the term "child" is taken to be any boy or girl apparently or actually under the age of sixteen years.

Social scientists have not usually adopted such a narrow formulation although the actual conduct of the offender remains important.

Glueck and Glueck define delinquency as:

...repeated acts of a kind which, when committed by persons beyond the statutory juvenile court age of sixteen, are punishable as crimes (either felonies or misdemeanors)--except for a few instances of persistent stubbornness, truancy, running away, associating with immoral persons and the like (1970, p. 4).

These authors point out that children who may steal once or twice during the period of growing up, sneak into a movie theatre, or escape paying for a ride on a subway, usually outgrow these "behavioural peccadilloes" and cannot be considered true delinquents, even though they may have technically violated an existing law. Moles, Lippitt and Withey (1959) state simply that:

...juvenile delinquency is behaviour which violates specific legal norms of dominant social institutions with sufficient frequency or seriousness to provide a firm basis for legal action (p. 126).

What is evident in the quotes from both of these groups of authors is a recognition that while a minor offense may result in an individual becoming labelled a "juvenile delinquent" this would not necessarily make such a person a delinquent in their frame of reference unless such activities has shown themselves to be a consistent feature of that person's behavioural conduct.

In this study a variety of options have been noted in making this determination, ranging from the selections of persons who exhibit: "aggressivity, inadequate impulse control, action without forethought, poor self-image, excessive variations in mood, poor interactions with peers and poor work habits" as McColgan (1977) has done, to a selection based upon a strict legal interpretation of the Juvenile Court and found guilty. Noting that court appearance would not necessarily make an adolescent into a juvenile delinquent according to the Gluecks' definition and that McColgan's definition could be easily adopted to encompass considerable numbers of students in any large composite junior high school, a middle ground has been sought in selecting those persons currently enrolled in juvenile institutions in the province of Alberta.

It is known that children and adolescents who are placed into institutional care are admitted under one of five designations. Permanent Wards are those for whom the provincial government, in the name of the Director of Child Welfare, assumes continuous legal guardianship and responsibility for until the age of majority. The care of such persons may result in placement in government owned or sponsored homes or institutions. Temporary Wards are those for whom legal guardianship is assumed by the Director for a limited, but renewable period of time. Children may be adjudicated temporary wards under the Juvenile Delinquents Act or the Child Welfare Act of Alberta. The latter adjudication circumscribes the issue of "protection" where removal and placement into care is considered in the best interest of the child and his development.

Institutional placements may also be made through voluntary agreements for temporary custody made between parents or guardians and the

provincial social welfare department. In this instance, acknowledgement is made by parents or guardians of an inability to actively assume a parenting role for a minor.

Last, placement into an institution can be made upon the recommendation of the Juvenile Court or the Director of Child Welfare under Compulsory Care Orders or Certificates for renewable periods ranging from 30 to 90 days where a child "presenting a danger to himself or others or is otherwise out of control" is temporarily detained in a closed environment in the best interest of the community as well as himself (Child Welfare Amendment Act, 1977).

Residential care facilities exist to serve the needs of acting-out children in an approximate age range from 10 to 16 years. This study has drawn male and female juvenile offenders ranging in age from 10 to 16 years who, under one of the five-noted custodial classifications are currently registered in full-time active Alberta institutions, which are wholly owned or sponsored by the Department of Social Services and Community Health of the government of the Province of Alberta.

Identification of the Non-Delinquent Control Group

For the purpose of this study, the identification of non-delinquent persons is less difficult than for delinquents. In this context, the reports of school personnel have been centrally important in determining those who may be deemed eligible for participation as control subjects. The participation of both male and female adolescents has been solicited, specifically those who have been identified by educational personnel as free of such debilitating social, interpersonal and behavioural patterns which would predispose them to delinquent conduct; who do not have identified histories as delinquent offenders

and have not reportedly been involved in delinquent activities.

Attempts have been made to match the Non-Delinquent control group to the Delinquents in proportion of males to females, in racial composition, socio-economic status, and proportion of rural to urban residence, while matching for intelligence and grade level has not been possible.

A total research group size of 314 was ultimately obtained, with fairly even matching in numbers of Delinquents to Non-Delinquents (158;156). This sample size was eventually pared to 224. The loss of 90 sample cases due to reasons related to incomplete historical records, incompleting test protocols or obviously faked and invalid responses is discussed in detail in Chapter 4.

Instruments

Piagetian formal operations assessment. Piaget has posited a lengthy transitional phase in the ages from 11 to 16: the period of Formal Operations. During earlier parts of the transitional phase, adolescents continue to place considerable emphasis upon Concrete Operational reasoning but an ever-increasing presence of propositional logic becomes evident in later years.

Propositional logic entails higher-order problem solving ability which, according to Piaget, must be conducted within the context of sixteen quasi-mathematical functions. Typically, propositional logic involves the transference of learning and reapplication of situation-specific principles in a much broader context.

Language is held to be indispensable in formal thinking. Piaget asserts, that such reasoning would be impossible were it not possible to pose questions verbally.

Information drawn from Brainerd (1978), Gallagher (1978), Kuhn,

Langer, Kohlberg & Haan (1977), Lunzer (1965), Piaget (1928) and Walker & Richards (1979), indicates that verbally presented problems can be prepared which will reflect the Formal Operational level and are atypical of the next lowest, Concrete-Operational logical level. These are classed as problems of verbal and numerical analogy, verbal class inclusion, verbal and numerical seriation, metaphor and logical absurdities.

Following precedents set by previous investigators, a cognitive development test battery has been organized which comprises verbal problems drawn from the classes identified by these authors. Empirical evidence presented by Kuhn et al (1977) and Lunzer (1965) has shown that similar verbal problems are of value in discriminating the Formal Operational thinker from those who are perceptually bound to concrete levels.

The cognitive test battery in the study comprised five subtests:

CD #1: Verbal Seriation (Transitive Inference)	6 items
CD #2: Verbal Class Inclusion	6 items
CD #3: Verbal Analogy	4 items
CD #4: Numerical Analogy	5 items
CD #5: Numerical Seriation	4 items

The number of items selected was arbitrary. A total of 25 multiple-choice type problems permitted a ready transformation to a percent correct score for each respondent. The simple aggregate score, termed Cognitive Development Total (CDT), served as the datum of central importance in subsequent statistical analyses. The individual subtest scores were also entered into the data analysis however, to determine the discriminative validity of the various measures. Appendix B lists the items in the five subtests which were in the Formal Operations assessment component of the research study.

The predictive validity of this cognitive measure was assessed through pilot testing with a random sample of Grade Three students (n=10), Grade Six students (n=6), all of whom were enrolled in regular programs in the public school system, and a group of junior college students (n=34) in a private religious college.

Results of the pilot assessment revealed an expected linear relationship in scores recorded for the three groups (N=50). For the junior college students, an arithmetic mean value of 23.56 was recorded which corresponds to a percent correct rating of more than 94. These persons, all of whom were aged 17 years or more, and whose academic achievement approximated university equivalency, were found to score well above the elementary school children. They would be expected to demonstrate a predominance of Formal Operational thinking. Grade three and six students averaged 36 percent and 56 percent correct responses, respectively.

Reliability studies for this measure have not been conducted, either through "split-half" or temporal stability procedures. This investigation awaits in the future refinement of the measure.

One important advantage of the multiple-choice format was that it diminishes the extent to which facility in language, particularly adept verbal explanations were required in assessing formal thought. Non-verbalizing features more often characterize delinquent offenders and their quality in verbal expression is more often impaired. This portion of the total assessment required a minimum reading literacy level of approximately grade three and, in all instances, respondents were expected to complete the test independently. In a very few cases among the delinquent group, research assistants verbally administered the items to examinees who were known to possess negligible reading skills and comprehension.

Another feature of this procedure in assessing formal thought is that it avoids the simple-stage model which characterizes cognitive-growth as a discontinuous process. In this study Formal Operations are viewed as emerging slowly and gradually among test respondents and the Formal Operations Percentage Score reflects the extent to which subjects would display this mode of thought. This feature is analogous to Rest's (1976 et passim) procedure for assessing principled moral judgement.

Moral reasoning assessment. The assessment of the moral reasoning of test subjects, in this study has been based upon responses to Rest's Defining Issues Test (DIT) (Rest, 1979a). It comprises the second part of the assessment battery.

Rest's Defining Issues Test, termed an "objective test of moral judgement", is comprised of six moral dilemmas patterned after Kohlberg's. Each story constitutes a problem of choice, and for each story there are 12 issue statements. Each issue statement has been prepared to reflect the moral thinking and reasoning of persons at one of the Kohlbergian moral levels and stages. The task of test respondents after having read a story posing a moral dilemma, is to read each issue statement and to then rate that item on its importance to the story. After having rated each item in importance, examinees then rank the four most important and relevant items. Each set of issue statements contains nonsense statements which are included to assess invalid and dissembled responses. Rest has derived two different validity checks to determine whether test respondents have answered the questionnaire cooperatively.

While the full six-story DIT can be administered in 30-40 minutes on average, a shorter version comprised of only three stories can be

completed in 15-30 minutes. This shorter form has been utilized in the current study.

According to Rest, moral judgement scores, as would be reflected in his test, tap the "basic conceptual frameworks by which a subject analyzes a social-moral problem and judges the proper course of action (1979a, p.51). Rest differentiates his assessment procedure from Kohlberg's clinical interview methodology through the following summary:

1. Kohlberg's assessment asks a subject to spontaneously generate a solution de novo to a problem, whereas the DIT asks a subject to evaluate various considerations provided to the subject. The DIT is a recognition task rather than a production task, and accordingly subjects are more advanced on the DIT.
2. Kohlberg's procedure requires a judge to classify a subject's responses according to scoring guides, whereas the DIT requires the subject himself to classify his own responses--thus making objective scoring possible.
3. Kohlberg's assessment locates a subject in a developmental sequence by stage typing (i.e., providing decision rules for saying a subject is "in" one or another stage), whereas the DIT's P-index locates a subject in terms of a continuous number representing the developmental continuum (more like Kohlberg's Moral Maturity Index). The way that a subject's development is indexed depends on a number of factors. Note that Kohlberg's method and the DIT both assume that there are qualitatively different cognitive organizations involved at different stages of development. With DIT data, stage typing is a poor way to index development and consequently statements are not made with the DIT regarding what Kohlberg stage a subject may be in.
4. Rest has formulated definitions of stage characteristics which draw heavily upon Kohlberg's stage discussions but are also different in some respects. Kohlberg has himself made many reformulations of stage characteristics since 1958, especially apparent in his recent (1978) Standardized Scoring procedure, but not all of these are completely comparable to the DIT. In this regard, Rest has commented on discrepant interpretations as to what criteria constitute Stage 6 moral reasoning. (Rest, 1979a, p.5.1).

Scoring of the DIT can be done by hand (according to guidelines established by Rest, 1979a) or by computer (Davison & Robbins, 1977).

The P% score has proven to be the most useful index from the DIT. It is a composite sum of the weighted ranks given to Postconventional moral Stages 5 and 6 and it is interpreted as the "relative importance a subject gives to principled moral considerations in making a decision about moral dilemmas". Additionally, other stage scores are computed to reflect percentage of agreement with Preconventional and Conventional moral sentiments (moral Stages 1 & 2, and Stages 3 & 4 respectively).

The M score represents the agreement with lofty sounding, but meaningless statements and reflects the extent to which test respondents tend to endorse statements according to their pretentiousness rather than their meaning. For the short form of the DIT an M raw-score greater than 4 is significant. Subjects with scores in this range fall two standard deviations above the average M score and are considered to be lacking in proper test-taking set.

The Consistency Check is also an indicator of the value of respondents questionnaires. If there is too much inconsistency between a subject's ratings and rankings of items or too little discrimination in preference for statements, the likelihood of an inappropriate test-taking set or of an inability to fill out the test appropriately must be seriously considered.

Rest (1979b) has stated that the DIT is not usable with very young examinees but he has used the measure successfully with Junior High students. Modifications of the test do exist. Carroll (1974) has developed a format of the test considered appropriate with younger

test subjects, and Williams (1979) has also utilized a modified form of the test. The Association for Values Education and Research (AVER), Faculty of Education at the University of British Columbia has modified the DIT to make the test more sensitive to the lower (Preconventional) stages.

Rest reports a correlation of .93 between the long and short forms of the DIT on P% score. Temporal stability coefficients ranging from .63 to .83 have been reported while internal consistency procedures, report Cronbach's alphas above .76. The Standard Error reported for the short form DIT is 9.7 on the P-index.

Rest has reported validity studies of three types:

Criterion-group validity: Validation here has shown that groups of subjects that would be hypothesized to have different scores on the DIT on theoretical bases, do in fact have different scores which are in directions postulated by theory. Rest has established a continuum ranging from 'youngest and least educated' junior high students to an "expert" group of Ph.D. students in moral philosophy and political science. Falling midway between these extremes were scores recorded for high school students, "average adults" and college students.

Longitudinal change validity: Rest, Davison & Robbins (1978) report DIT scores for a group of subjects followed over a period of four years with two reassessments. Sixty-six percent of the subjects were found to move upward; only 7% were seen to move downward.

Convergent validity: Rest has reported the results of studies testing the relationship between the DIT and variables which would be assumed, theoretically, to be more similar to moral development than variables which are theoretically dissimilar. Data published by Rest (1979b) and Rest, Carroll, Lawrence, Jacobs, McColgan, Davison and

Robbins(1977) reveal the findings of more than 100 correlational studies.

Rest notes:

With other measures of moral reasoning (various versions of Kohlberg's test and the Comprehension of Moral Concepts test) the correlations go up to the .60's and .70's, averaging about .50. With other measures of cognitive development and intelligence (not distinctively moral reasoning) the correlations are generally a little lower, in the .20's to .50's range, averaging .36. With various measures of attitudes and personality, the correlations are rarely high and usually non-significant or inconsistent. With demographic or sociological variables such as sex, socioeconomic class, and political party, the correlations are usually non-significant or very low. Therefore from the pattern of correlations obtained on the DIT with a great variety of variables, the empirical relationships do tend to follow the theoretical similarity--dissimilarity of moral judgement with other constructs (Rest, 1979a, p. 6.5).

Influences upon DIT scores. Research shows that a progressive and linear relationship exists between age, educational level and moral reasoning (expressed on the DIT as P%). Rest has noted that P% is most highly correlated first, with educational level and secondly, with age. His data shows that subsequent moral advance drops off following withdrawal from the educational system. Supposedly those who remain in school longer have greater opportunities to stimulate their thinking and to continue to advance in moral judgement, but once formal education ceases apparently advance of moral thought ceases as well.

Correlations between the DIT and measures of cognitive growth (I.Q., aptitude and achievement) are consistently in the .20 to .50 range (Pearson product moment correlations). The DIT correlates as strongly with non-verbal measures of cognitive capacity as with verbal measures and therefore it has been proposed that the DIT is not strongly influenced by any special factor or skill such as language or knowledge of special terminology (Rest , 1977). Rest suggests that advance in

moral thinking is related more to general cognitive advance than to specific reading or vocabulary skills development. Studies have not found consistent or strong correlations with the DIT and Socioeconomic Index as measured by either the Hollingshead or Duncan scales. The range of correlations has been from .02 to .38 (Rest et al, 1977). No consistent sex bias has been shown in moral thinking and, of 22 studies only 2 have reported any significant sex effect. Less than 6% of the variance in DIT P% scores has been accounted for by sex.

Summarizing his review of the most recent data available on the correlational validity of the DIT, Rest states:

Education and I.Q. have the most consistent relations to the DIT of the variables examined (so far). Age is related to the DIT for student groups but not for the adult groups. There is suggestive evidence that intellectual milieu as indicated by region of the country and religious membership (assessed at the individual congregation level--not denomination) is associated with moral judgement. Sex, SES, political activity party, type of residence, profession or college major do not have clear and consistent relationships (1979a, p. 7.6).

For Junior High groups most sample means have ranged from 20 to 26 P% in more than 7 of 10 research reports.

In this study, three of the six Rest moral dilemmas have been employed: Heinz; Escaped Prisoner; and Doctor's Dilemma. Taking into consideration modifications in test format made by Carroll (1974) and Williams (1979) the following adjustments were made from the standard DIT format:

1. Issue statements have been changed to simple declarative form.
2. Word substitutions have been made to the reading level required to a level comprehensible by elementary school children.
3. Ratings originally labelled from No Importance to Much

Importance on a five-point scale have been modified from Strongly Disagree to Strongly Agree.

4. Additional issue statements have been included which are considered to be more sensitive to Preconventional moral thinking and specifically the Reward-and-Punishment moral Stage 1 orientation.

The standard DIT format and the modified format were presented to two Educational Psychology doctoral students knowledgeable in both moral educational research and in the Kohlbergian hierarchical stage model specifically. Those modifications which both experts agreed did not appreciably alter the context of the original issue statement were retained. Stage 1 statements were not included in P% calculation but were utilized in Moral Maturity Score (MMS) calculations.

Social perspective-taking. Reference to role-taking abilities has been traced to the theoretical writings of Baldwin (1906) and Mead (1934) where "role-taking" is viewed as one unique aspect of social cognition that differentiates human from subhuman functioning. Role-taking had been described as "the ability to understand the self and others as subjects, to react to others as like the self and to react to the self's behaviour from the other's point of view" (Selman & Byrne, 1974, p. 803). The capacity to role-take is not considered to be present in infancy, but appears to progress through an identifiable ontological sequence from childhood through adulthood. Not only developmental psychologists, but social psychologists as well, have been interested in investigating, identifying and clarifying the steps through which a growing child passes in coming to know about his social world and relations.

A level of social perspective-taking describes the way in which a child understands the relations between perspectives of self and other. This analysis emphasizes the form rather than content of the child's

comprehension of social relations; it also emphasizes the ability to conceive subjective perspectives rather than the absolute accuracy of person perceptions (Selman & Damon, 1975). Selman's work and that of his associates has been based upon the following assumptions:

1. Children's reasoning develops through a sequence of ordered stages, with each new stage representing a progressive reorganization of the prior stage.
2. Role-taking development plays an important part in a wide range of human social behaviours. There are considered to be four general areas of application:
 - (a) children's general social problem-solving ability, (for example, ability to play cooperative or competitive games such as hide-and-seek);
 - (b) children's communicative and persuasive abilities;
 - (c) children's understanding of the feeling for others (sympathy, empathy); and
 - (d) children's understanding of fairness and justice, in the development of moral reasoning (Selman, 1976).

Selman (1975,1976), Selman & Byrne (1974) and Selman & Damon (1975) have clarified the characteristics of persons who exhibit varying degrees of role-taking ability within the context of a five-stage role-taking sequence:

Egocentric Social Perspective-taking (Level 0): At the egocentric level of role-taking ability, there is a belief that the self's thoughts and feelings are separate but identical to those of others when the self and other are in an identical situation. There is a confusion of the self's subjectivity with the subjectivity of the other. Social perspective-taking at Level 0 predominates in the reasoning expressed by children in the age range from 3 to 6 years.

Subjective social perspective-taking (Level 1): With advance to Level 1 comes a clear recognition that the perspective of the self is unique and therefore separate from the other's. At this level, a child realizes that self and other may view the same social situation in very

different ways and that similar actions may reflect differing motivations. Here, a child focuses on the uniqueness of the subjective nature of others rather than upon the other's overt actions and there is a new awareness of thoughts, feelings and intentions of others as distinct from the self's. The child however, has difficulty maintaining his own perspective and simultaneously putting himself in the place of others in attempting to judge their actions.

Self-reflective perspective-taking (Level 2): The primary advance in this level is that the child begins to see viewpoints of persons in relation to one another. The perspectives are now seen in reciprocal influence and not as independent assessments of objective information. The child also begins for the first time, to appreciate that his actions, judgements and conduct are open to scrutiny by others and he views others now knowing that they can view him just as he may view them. This reciprocity is still immature--the child cannot "get outside" of the dyadic interpersonal situation and view it from a "third-person" vantage. Level 2 perspective taking normally occurs after the age of eight.

Mutual social perspective-taking (Level 3): At this level, a child becomes aware of "infinite regress" in dyadic relations (I know that you know that I know...) and that each person is simultaneously aware of his own and other's subjective abilities. The major leap here is that the child begins to view interactions with subjective perspective from a third-person vantage. He begins to see interpersonal relationships not as transient and situation-specific, but to be relatively enduring over time. Emergence of Level 3 social perspective-taking normally occurs around the age of 10 to 12 years.

Social and Conventional System Role-Taking (Level 4): At Level 4 an adolescent gains further awareness that mutuality in understanding

of other's points of view may occur at qualitatively different levels-- for example, one may know another as friend, business partner, lover, acquaintance, etc. Persons at this level realize that mutual perspective-taking does not always lead to complete understanding and that social conventions become necessary because they will be understood by the group regardless of their role, position, power or experience.

Symbolic-Interactional Perspective-Taking (Level 5): At this level an individual becomes aware that the subjective relations between self and other may have multiple meanings-- some overt and factual--others symbolic. Persons cannot be assured of knowing one another in the sense of absolute accuracy in person perception, but gain understanding from stepping back and viewing the relation between persons at each of the multiple levels of meaning. Perspective-taking here focuses upon the interaction between subjects rather than upon the subjects separately (Selman, 1975; Selman & Damon, 1975).

Selman and Byrne (1973) have developed a scoring guide for the assessment of role-taking in moral and non-moral interviews. Selman has prepared a series of open-ended questions which have been intended to complement issues posed in typical Kohlbergian style moral dilemmas.

A precedent for the use of Selman's coding procedure in delinquency research based upon a three-point scale is reported by Jurkovic & Prentice (1977). "1" identifies lack of awareness of another person's motives as being relevant; "2" identifies awareness of underlying motivation for another's choice but no recognition that the other person is also aware of one's own motives; "3" identifies awareness that reciprocal role-taking is involved.

In this study, open-ended questions were prepared for each of the

three moral dilemmas which comprised the Rest DIT measure. These items were included according to Selman's guidelines and were intended to probe the extent to which test respondents were capable of appreciating the viewpoint of another removed from themselves and of the implications of a particular moral dilemma for that person (for example, in the Heinz moral dilemma: What would his wife think if he did not steal the drug? What would she want him to do?).

On this measure, objective, standardized scoring has not been possible therefore the participation of judges has been solicited, who have been familiarized with Selman's scoring criteria.

Scoring practices have taken into consideration that many sample subjects, particularly among the delinquent sample, do not possess high levels of literacy or writing ability therefore, subjects who have provided brief answers have not been penalized for doing so.

Thirty role-taking test protocols (15 delinquent; 15 non-delinquent) have been extracted at random for scoring by two graduate students in doctoral programs in Educational Psychology. Pearson correlation coefficients of .74 and .83 have been recorded, respectively.

The Sequential I-level classification method. Until 1974, the only major method for assessing I-level was based upon Warren's (1966) clinical screening procedure. This involved an interview with each delinquent offender covering a number of topics including the client's attitudes and feelings about himself and those around him toward authority figures and his ability to think and project himself into the future. The content of these interviews was then examined within the context of the I-level characteristics as articulated by Warren.

Assignment to particular I-level is a subjective assessment based upon the nature and extent to which the respondent reveals character-

istics as listed in the I-level descriptions. Fairly consistently high inter-rater reliability has been recorded for this clinical approach. Despite this, there have been several major problems inherent in the clinical diagnostic procedure which could not be readily overcome (reviewed in Jesness, 1974). Jesness has, for nearly a decade, progressively improved and refined an actuarial system for classification which then culminated in the publication of his Sequential I-level Classification Manual in 1974.

I-level diagnoses are based upon responses to the Jesness Psychological Inventory (1972) and optionally, the Jesness Behaviour Checklist--Self-Appraisal Form (1971c). I-level assignment is then based upon a multiple discriminant analysis where such analysis produces a series of linear discriminant functions for each of the criterion groups. An individual's pattern of scores then determines how similar he is to the average pattern (or centroid) for each level. Accordingly, a probability score is computed indicating his relative distance from the centroid of each of the three levels.

Jesness reports that use of the Jesness Inventory alone results in a high accuracy of classification for level. The companion use of the Behaviour Checklist Self-Appraisal Form reduces the possibility of misclassification to less than 15 percent (Jesness, 1974).

Jesness' manual reports two separate reliability studies indicating consistency of classification over a two week period of 80 and 78 percent for I-level.

Jesness has validated his actuarial system against Warren's clinical methodology and has reported 70 percent agreement for I-level. Further empirical validation of the computerized Sequential I-level assessment method has revealed the following:

- a) a correlation between I-level and intelligence (as measured by the California Test of Mental Maturity) was reported to be .23 when age and race were partialled out;
- b) the correlation between Maturity level and race (defined as white or non-white) was $-.27$ with I.Q. and age partialled out (whites scoring higher in I-level);
- c) the correlation between age and Interpersonal Maturity classification was .07 (n.s.) with I.Q. and race partialled out;
- d) comparing his classification with Ego-Development Scale of Loevinger, Jesness reported a correlation of .47. When race, age and I.Q. were controlled, the correlation dropped to .33;
- e) contrasting I-level and Rotter's locus of control (I-E scale), Jesness reported a correlation of $-.38$. A negative relationship was seen to exist between I-level and externality. That is, as I-levels increased, offenders were seen as more "internal"--supposedly an indication of "better" psychological functioning;
- f) perceptual differentiation and I-level were examined. Such differentiation was tested with Witkin's Embedded Figures Test and a correlation of $-.36$ between field-independence and I-level recorded. When I.Q. was controlled this relationship dropped to .14 (n.s.);
- g) the I-level system and the Eysenck Personality Inventory were compared. Results indicated that impulsiveness, sociability, neuroticism and psychoticism all bore expected relationships to I-levels as predicted by the theory;
- h) comparison of actual conduct patterns of offenders classified through the I-level system and behaviour checklists have recorded correlations as high as .80 in the predicted direction between expected and observed behaviour;
- i) other studies have shown that lower I-level subtypes present a low but positive relationship to length of stay in institutions (longer), possibly reflecting more extensive and severe behavioural problems;
- j) differential receptivity to treatment programs such as Transactional Analysis and Behaviour Modification has been noted for differing I-levels;
- k) a modest relationship between I-level and parole performance has been reported;
- l) staff assessments of offenders' conduct have revealed their observations of greater social maturity amongst offenders formally classified at higher levels of Interpersonal Maturity than those at lower levels of Interpersonal Maturity;

- m) offenders at high levels of Interpersonal Maturity revealed more positive sentiments about "treaters" and institutions than those offenders at lower levels of Interpersonal Maturity;

Scoring of the Jesness Inventory (JI) was conducted via computer analysis arranged by the publishers of the test (Consulting Psychologists Press). Test item responses were transcribed onto standard JI answer sheets for conveyance to the United States for analysis there. Information that was subsequently obtained for each examinee included a probability statement regarding the most appropriate I-level classification (either I-2, I-3 or I-4). Additionally, for each subject, T-scores on 10 personality trait scales of the Inventory (plus a discriminant function Asocial Index score) were acquired. Brief descriptions of these personality trait scales are provided in Appendix C.

Administration and data collection procedure

The data to be acquired for each test respondent included information on cognitive development--specifically the extent to which Formal Operational thought characterized respondents' thinking in directed problem-solving tasks; moral reasoning--specifically the extent to which Principled moral judgements were comprehended and endorsed by respondents; and extent to which respondents demonstrated empathic understanding of the feelings and attitudes of others removed from themselves--expressed as reciprocal role-taking. Finally, data regarding I-level classification and related personality characteristics was acquired.

This information was organized into a comprehensive test questionnaire which had been prepared for completion at a single administration and would be, with few exceptions, self-administering. With these objectives in mind, test items had been selected to which respondents would be permitted to respond independently without extensive or individualized demonstration, instruction or interaction. In several limited instances,

students in the delinquent sample, who were known to possess severe delays in reading or writing skills, completed the questionnaire through assistance of child care staff who cooperated in verbally presenting test items.

Sample subjects were accessed in four Northern Alberta residential juvenile institutions and in four Northern Alberta educational institutions. The procedure in all instances was to contact administration personnel directly and to present the purpose and objectives of the study for preliminary approval. Subsequent to this, brief orientation and training sessions were conducted with child care and educational staff to provide them with information regarding data collection procedures. It had been considered that enlisting the involvement of child care and educational staff personally known by and familiar to test respondents especially in the residential delinquent locales, would prove to be of value in promoting greater cooperation by the students.

Orientation to staff members covered five main areas: (i) information regarding the actual purpose of the study, that being to validate a typology of delinquency and to determine its applicability in Alberta institutions (ii) subjects were to be advised that completion of the questionnaire was voluntary and that test results would not impact upon decisions which would affect them personally, but that the information would be of value in promoting better services to kids in institutions generally, (iii) while the questionnaire was designed to be essentially self-administering, as proctors they would be requested to assure that test respondents were capable of filling out the test properly and would be available to respond to any problems

which could prevent examinees completing the questionnaire; (iv) they were not to overly inform subjects as to the specific purpose of the testing battery; (v) proctors, finally, were requested to inform the investigator of unusual or remarkable events which they may feel have interfered with the value of test results for individual students.

Arrangements were made in all instances, where institutional access was permitted, to provide follow-up, debriefing fully the testing results and related information which had been acquired at the completion of the study.

Scoring methodology. Following the collection of the data for both Delinquents and Non-Delinquent control subjects, scoring of the questionnaires was conducted in following manner.

1. The multiple-choice format of the cognitive development component provided readily objective scoring with templates. Individual subtest scores were calculated and a single total composite score over the five subtest measures was computed; this constituted the main cognitive development test measure (CDT).
2. The Defining Issues Test moral dilemmas were scored according to the objective criteria established by Rest (1979b). This involved determining the percentage of endorsement of statements reflecting principled moral reasoning (stages 5 and 6) and expressed as P%. Additionally, the data of the DIT provided the computation of a Moral Maturity Score (MMS) which is roughly analogous to Kohlberg's index.
3. The Social Perspective-Taking questions were evaluated subjectively by trained judges according to guidelines established by Selman & Byrne (1971). Responses were rated according to approximate role-taking level, which theoretically ranged from level 0 to level 5. Scores for each moral dilemma were then summed and averaged. Interrater reliability coefficients (Pearson product moment correlation coefficients) were determined to range between .74 and .83 over randomly selected test protocols (n=30).

4. Responses to the Jesness Inventory were transcribed on-to standard JI answer sheets and sent to California for computer analysis there. The determination of I-level based upon Jesness' Sequential I-level Classification Method was conducted through a program developed there but not yet available in Canada.

Demographic data. Each of the institutionalized offenders possessed a social services admission folder which provided a wealth of sociological, demographic and psychological data. The following information was sought for the delinquent group members where available:

- Sex
- Birthdate and current age
- Racial Origin
- Religion
- Grade level (if known)
- Rural or urban residence
- I.Q.
- Academic achievement scores
- Siblings
- Birth position
- Family size
- Parental occupation (socioeconomic status)
- Presence of parents in home
- History of delinquencies
- Number of admissions
- Length and nature of behavioural problems

Information regarding race, religion, grade, delinquencies and parental occupation was not, in all instances known or available in the resident's chart nor could it be determined by questioning the student. Greater than 3 in 4 institutionalized offenders had recently been administered psychoeducational tests including individual intellectual assessments and academic achievement screening tests (Reading, Math and Language Arts).

CHAPTER IV

Data Analysis and Conclusions

Table 6 reviews the hypotheses under investigation in the present study. Sets 1 and 2 have been included in order to reaffirm relationships previously found to exist between Delinquent and Non-Delinquent groups, and between the principal logical and socio-cognitive variables. Set 3 explores the relationship of Interpersonal Maturity level to these variables.

The delinquent group

Students comprising the delinquent sample were located and tested in four institutional settings. Both males and females participated. Ages at time of assessment ranged from 8 to 16 years and the length of time in active treatment ranged from a period of less than two weeks to more than two years. Demographic and sociological data was obtained through reference to individual social-historical records, however information regarding race, religion, grade level, nature and extent of delinquencies or parental occupation was not, in all instances, readily available. Therefore these variables were not included in any of the subsequent analyses of the delinquents.

A fortuitous finding was that more than 75 percent of institutionalized offenders had recently been administered psychoeducational assessments involving individual intellectual and achievement testing. These measures had, in all cases, been obtained within a previous 12 month period.

For several reasons the total initial sample size of 158 offenders was pared to a final sample size of 84. To be detailed later, these reasons are related to, and a result of, incomplete or invalid test protocols.

TABLE 6

Statement of Hypotheses

-
- 1.0 Delinquents, in relation to Non-Delinquents, will score lower in the extent to which they demonstrate Piagetian Formal Operational thinking, as measured by a 25-item, multiple-choice, formal operations test battery.
 - 1.1 Delinquents, in relation to Non-Delinquents, will score lower in level of moral judgement and reasoning--specifically that they will neither comprehend nor endorse principled moral statements as frequently as Non-Delinquent control subjects as measured by Rest's Defining Issues Test (1979b).
 - 1.2 Delinquents, in relation to Non-Delinquents, will display a more egocentric and non-reciprocal social perspective-taking level as measured by Selman's (Selman & Byrne, 1971) developmental scale.
 - 2.0 Level of cognitive development, as measured by a 25-item, multiple-choice formal operations test battery, is positively related to level of moral development as measured by Rest's Defining Issues Test--specifically that degree of formal operational thinking will be positively correlated with degree of principled moral reasoning.
 - 2.1 Level of cognitive development, as measured by a 25-item, multiple-choice formal operations test battery, is positively related to social perspective-taking ability as measured by Selman's developmental scale--specifically that degree of formal operational thinking will be positively correlated with degree of reciprocal perspective-taking ability.
 - 2.2 Level of moral development, as measured by Rest's Defining Issues Test is positively related to social perspective-taking ability as measured by Selman's developmental scale--specifically that the degree of principled moral reasoning will be positively correlated with degree of reciprocal social perspective-taking ability.
 - 3.0 Delinquents at each of the Interpersonal Maturity Levels, as measured by Jesness' Sequential I-level classification system, will be found to differ significantly in Piagetian cognitive development, as measured by a 25-item multiple-choice formal operations test battery--specifically that delinquents possessing higher levels of Interpersonal Maturity will be found more often, to display formal cognitive operations than delinquents at lower Interpersonal Maturity levels.

cont'd

- 3.1 Delinquents at each of the Interpersonal Maturity levels as measured by Jesness' Sequential I-level classification system, will be found to differ significantly in level of moral judgement development, as measured by Rest's Defining Issues Test--specifically that delinquents possessing higher Interpersonal Maturity will comprehend and endorse a significantly greater number of principled moral issue statements than delinquents at lower Interpersonal Maturity levels.
 - 3.2 Delinquents at each of the Interpersonal Maturity levels, as measured by Jesness' Sequential I-level classification system, will be found to differ significantly in social perspective-taking ability as measured by Selman's developmental scale--specifically that delinquents functioning at higher levels of Interpersonal Maturity will be shown to exhibit a more differentiated, and reciprocal perspective-taking ability than delinquents at lower Interpersonal Maturity levels.
-

In the latter case, while test protocols may have appeared invalid due to a genuine inability to correctly fill out the test properly, more frequently a deliberate attempt to fake or respond insincerely to the test battery was identified. Statistical procedures utilized in the identification of invalid protocols are discussed in a later section.

Table 7 provides a descriptive comparison of the original Delinquent sample (n=158) and of the final delimited Delinquent sample (n=84). Figures in parentheses are standard deviations.

The Non-delinquent group

The Non-Delinquent group totalled 156 male and female adolescents ranging in age from 11 to 16 years. These subjects had been identified by school personnel as not posing exceptional disciplinary problems and without known histories or records as delinquent offenders. Classes in grades seven and nine at the Junior High School level were tested in both Public and Separate systems and in rural and urban centres.

Of the initial total sample size of 156, 140 were finally utilized in the statistical tests of hypotheses. Sixteen subjects were found to be unclassifiable according to I-level and data sets for these persons were therefore ejected from final analysis. Two of these 16 were also found through a statistical comparative analysis, to have produced data conforming closely to random test responses. None of the remaining 140 approximated dissimulated profiles.

Table 8 presents the results of the data obtained for the delimited final sample of 140 Non-Delinquent controls, and the delimited final sample of 84 Delinquents. Scores on the five cognitive subtests, the total cognitive measure (CDT), the moral judgement measures (expressed as P% and Moral Maturity Score: MMS), the role-taking measure (SPT) and

TABLE 7
Descriptive Comparison of Initial and
Final Delinquent Samples

	Original Sample (n=158)		Delimited Sample (n=84)	
Sex: males	66%		57%	
females	34%		43%	
Age (months)	156.0	(23.4)	159.0	(20.3)
Grade ¹	6.2	(2.1)	6.4	(2.2)
Socioeconomic Index ²	33.56	(7.11)	33.66	(6.70)
Setting ³	3.12	(1.91)	3.12	(2.0)
Race ⁴	65% white		84% white	
Rural/Urban Residence	69% city		73% city	
Verbal I.Q.	89.6	(12.2)	92.4	(11.2)
Non-Verbal I.Q.	95.5	(13.1)	95.3	(14.6)
Full Scale I.Q. ⁵	93.1	(12.6)	95.6	(13.4)
Educational Retardation ⁶ (months)	17.5	(20.4)	11.9	(17.4)
Birth Order	2.79	(2.45)	2.07	(1.37)
Family Size	4.02	(2.65)	3.07	(1.73)
Broken Home ⁷	72%		74%	
Criminal Charge ⁸	47%		46%	

¹Where identified, grade level refers to nominal grade placement at the time of assessment. Considerable numbers of delinquents were in ungraded remedial programs.

²Socioeconomic Index, as measured by Blishen's (1967) classification for occupations in Canada. Based upon the occupation of the parent or guardian with whom a juvenile was resident prior to institutionalization.

³Sample subjects ranged from those resident in closed and locked units to those in group homes. Numerical values were assigned from 1 to 6 according to a rank ordering of the controls present: A score of 1 was associated with delinquents in locked residential units, attending on-campus schools while a score of 6 was assigned to delinquents in community group homes, attending regular programs in community schools.

⁴Race was defined as white or non-white (Treaty Indian or Métis). Less than 4% of the sample was of another racial or ethnic origin (for example, negroid).

⁵Intellectual measures included scores for both individually as well as group-administered I.Q. tests. Where intelligence quotients were broken into Verbal and Non-Verbal measures (for example WISC-R, Lorge-Thorndike), these have been listed. The Full Scale I.Q. score also includes those measures which do not differentiate Verbal and Non-Verbal scores (for example, Stanford-Binet).

⁶Academic retardation was computed through comparison of actual scholastic achievement in relation to that expected for chronological age and nominal grade placement.

⁷Broken Home was defined as present when sample subjects were known to be resident with either or neither parent--whether biological or putative.

⁸Criminal Charge was scored as present when social-historical information indicated that delinquent charges had been laid or were pending by law enforcement authorities.

TABLE 8

Delinquent and Non-Delinquent Contrasts:
Tests for Set I Hypotheses

	Delinquents (n=84)		Non-Delinquents (n=140)		p
Age (mos.)	159.0	(20.3)	167.3	(27.1)	n.s.
Sex	57% males 43% females		47% males 53% females		
Grade	6.4	(2.2)	7.9	(0.9)	**
SEI	33.66	(6.7)	50.47	(14.2)	**
<u>Cognitive Development</u>					
CD#1	4.9	(1.2)	5.6	(0.7)	*
CD#2	3.7	(1.3)	4.6	(1.2)	n.s.
CD#3	2.8	(1.0)	3.4	(0.7)	*
CD#4	3.0	(0.9)	4.1	(0.9)	***
CD#5	2.9	(0.9)	3.3	(0.9)	n.s.
CD Total	17.3	(4.4)	21.0	(2.8)	***
<u>Social Perspective-Taking</u>					
SPT	1.50	(0.40)	1.92	(0.44)	**
<u>Moral Reasoning</u>					
P%	22.4	(14.0)	29.5	(15.7)	(.06)
MMS	271.7	(46.7)	291.2	(35.2)	*

(cont'd)

* .01 < p < .05

** .001 < p < .01

*** .000 < p < .001

	Delinquents (n=84)	Non-Delinquents (n=140)	p
<u>Jesness Inventory (T-scores)</u>			
Social Maladjustment	60.1	48.0	***
Value Orientation	52.2	45.9	.056
Immaturity	54.6	52.0	n.s.
Autism	55.7	47.7	***
Alienation	54.1	46.1	*
Manifest Aggression	51.6	47.8	n.s.
Withdrawal	52.3	52.2	n.s.
Social Anxiety	49.7	53.6	n.s.
Repression	52.6	53.5	n.s.
Denial	48.1	51.3	n.s.
Asocial Index	60.1	47.3	***
<hr/>			
I-level	2.97	3.84	***

* .01 < p < .05
 ** .001 < p < .01
 *** .000 < p < .001

each of the 10 Jesness Inventory personality trait scales, plus the computer-generated I-level classifications are presented. Numbers in brackets are standard deviations.

With reference to grade, it will be noted that the Delinquent group averaged more than one full academic grade below the Non-delinquent group, despite non-significant age differences. This finding appears to support other observations that delinquent offenders, especially those held in institutions, characteristically have histories of very poor scholastic achievement, with failure of grades. A variety of researchers have indicated that the incidence of learning difficulties is considerably higher for these persons (Murray et al, 1976). In this contrast, excluded were those delinquents who were not enrolled in an identifiable grade due to their participation in special or remedial programs.

A significant difference in Socioeconomic Index, as measured by Blishen's (1967) occupational scale was reported. In this study, Delinquent offenders in institutions were more frequently characterized as later born children in large families where the biological parents were no longer both present in the home. Male offenders more often remained with their mothers who were often either unemployed, on social allowance or working in unskilled, or temporary employ. The Non-Delinquent control sample was more often characterized by residence in homes where both biological parents were resident and where parental occupations included a large proportion of business and related office-worker classifications.

While Table 8 indicates that the Delinquent and Non-Delinquent groups differ significantly in I-level, Table 9 provides information regarding actual distributions of Delinquent and Non-Delinquent students

TABLE 9
Chi-Square Analysis: Delinquents vs.
Non-Delinquents by I-level

Group	I-level			
	I-2	I-3	I-4	
Delinquents	26	34	24	(n=84)
Non-Delinquents	0	22	118	(n=140)

$\chi^2=104.50, df(2) p<.001$

TABLE 10
Percent Distribution of I-levels in Various
Populations Based upon Actuarial Classification¹

	Delinquents			Non-Delinquents ²	
	Current Study (n=84)	Calif. Youth Authority Wards (n=387)	British Borstal Wards (n=203)	Current Study (n=140)	Calif. Jr. High Students (n=104)
I-2	30	6	16	0	4
I-3	41	44	63	15	20
I-4	29	50	21	84	77

¹Comparative figures drawn from Jesness (1974) and Smith (1974).
²Not all sums equal 100 percent due to rounding.

for whom a clearly identifiable I-level was derived, according to Jesness' (1974) classification criteria. More than 84% of the Non-Delinquents were found to be functioning within the highest of the three I-levels (I-4) while 15 percent fell within the mid-I-level range (I-3). None were identified at the lowest I-level (I-2). For the Delinquent group there was much more even distribution by I-level: 30%, 41%, and 29% respectively, for Levels: I-2, I-3, and I-4. Chi-Square analysis indicated that the deviation in actual from expected cell frequencies was very significant ($\chi^2 = 104.50$, $df = 2$, $p < .001$).

It may be noted, in comparing delinquent I-level distributions to previously published information (Jesness, 1974) that the lowest level, I-2, is overrepresented in this sample. Table 10 compares the findings of several previous studies with those of the current study. No obvious reasons for this overrepresentation of the lower I-levels are apparent, however several speculations can be made. First, an age relationship is evident in I-level advance; this is congruent with the theoretical model and with empirical findings. Secondly, as Table 11 reveals, detainees at the lowest levels were significantly overrepresented in the youngest age cohorts: 9-10 and 11-12. This may reflect that the younger, preadolescent offenders who are already held in institutions, despite their limited years, have exhibited a chronic history of acting-out behaviours, with concomitant lack of response to previously attempted remedial intervention strategies. These involvements may lead to more serious problems of adjustment which would be reflected in and consistent with lower I-level functioning. Data which could prove illuminating would be I-level information regarding age-matched Non-Delinquent controls in the 9-12 age bracket.

TABLE 11

Chi-Square Analysis of Delinquents: I-level
Distributions by Biennial Age Cohort

I-level	Age Group			
	9-10	11-12	13-14	15-16
I-2	8	10	4	4
I-3	2	10	16	6
I-4	2	8	10	4

$\chi^2=12.38$, $df(6)$, $.02 < p < .05$

This would reveal the extent to which persons in institutions are over-represented in lower I-levels in the preadolescent age group. Last, the reported I-level proportions for the delinquents may be an artifact of sampling procedure.

Table 8 and Figure 1 detail the contrast between the two groups on personality trait scales of the Jesness Inventory. Brief descriptions of these personality scales are offered in Appendix C. F-ratios computed for the Delinquent/Non-Delinquent contrasts indicated significance on four of the personality measures: Social Maladjustment (SM), Autism (Au), Alienation (Al), and the discriminant function ASOCIAL INDEX (A.I.), with one scale, Value Orientation (VO), approaching significance at $p < .056$. Previous research (Mott, 1969; Saunders & Davies, 1976; Stott & Olczak, 1978; Werner, 1972) has shown these particular scales to discriminate between disturbed, delinquent, acting-out adolescents and less serious or non-delinquent samples. The JI findings in this study confirm the sensitivity of this personality measure in differentiating, in a psychologically meaningful way, those persons with known histories of and strong predisposition for, acting-out antisocial behaviour from those with no known histories of antisocial conduct.

Tests of Hypotheses

Hypothesis 1.0. This hypothesis proposed that Delinquents would demonstrate less Piagetian Formal Operational thinking in relation to a Non-delinquent control group as measured by 25 multiple-choice items of propositional logic. The results reported in Table 8 illustrate significant differences between the two groups on three of the five cognitive subtests: C.D.#1 (Verbal Seriation or Transitive Inference) $F=2.07$, $p < .05$; C.D.#3 (Verbal Analogy) $F=1.79$, $p < .05$; and C.D.#4 (Numerical Analogy)

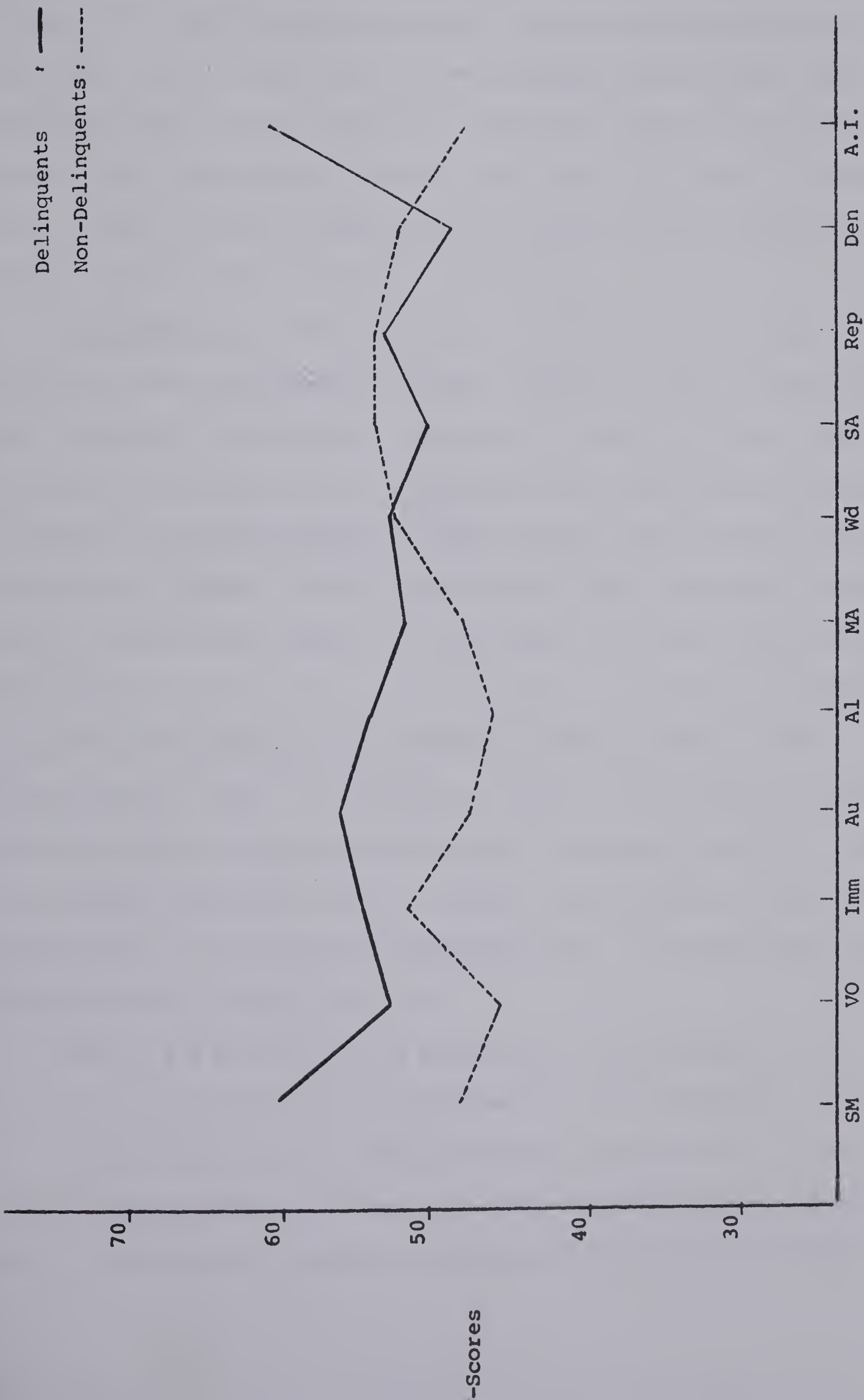


FIGURE 1
Comparison of Delinquents and Non-Delinquents on
Eleven Scales of Jesness Personality Inventory

$F=3.07$, $p<.001$. The cognitive test battery total (CDT) was also seen to be highly significant $F=2.78$, $p<.001$; the finding confirms Hypothesis 1.0. This assessment procedure and resulting score deviates from other studies which have utilized individual interactions with extensive verbal probes leading to a subjective simple stage classification, i.e., Formal Stage IIIa or Formal Stage IIIb. The CDT measure does not make differentiations between beginning Formal, early basic Formal, or integrated basic Formal Operations.

Hypothesis 1.1. This hypothesis examined the relationship of Delinquent and Non-Delinquents in moral judgement. Moral reasoning has been reported in two measures. As proposed by Rest, a P-index or P% score has been computed based upon the percentage of endorsement of issue statements reflecting principled moral thinking, moral Stages 5 and 6 in Kohlberg's scheme. A Moral Maturity Score (MMS), analogous to Kohlberg's, has also been computed. This, however, has been based upon the responses to the Rest's DIT and is not based upon Kohlberg's standardized interview and classification methodology (Kohlberg, Colby, Gibbs & Speicher-Dubin, 1978). A computation of MMS in this study has required the calculation of percentages of agreement to issue statements at each of the moral Stages and levels. A linear transformation of this information derives an approximate Kohlberg MMS score. The transformation as reported by Rest (1979a, p.72) is:

$$\begin{aligned} \text{MMS} = & (1 \times \% \text{ Stage 1}) + (2 \times \% \text{ Stage 2}) + (3 \times \% \text{ Stage 3}) + \\ & (4 \times \% \text{ Stage 4}) + (5 \times \% \text{ Stage 5}) + (6 \times \% \text{ Stage 6}). \end{aligned}$$

For P%, test results indicate borderline significance ($p<.06$). The mean values recorded for the Delinquent and Non-Delinquent groups were in the direction predicted (Delinquents scoring lower than Non-

Delinquents), while the MMS score was found to significantly differentiate between the two groups ($p < .05$). The values for P% reported in this study conform closely to those published by Rest (1979a;1979b) and reported in summaries of collected research with students at the junior high level (Rest et al, 1977). Seventy-one percent of junior high students, according to Rest, obtain P% scores ranging from 20 to 26 points.

MMS in this study is higher than that reported in Kohlbergian studies of delinquency. This may be accounted for in two ways: First, a non-standard Kohlberg assessment procedure was followed. Secondly, in comparing the Rest procedure to Kohlberg's, it has been shown consistently that persons score higher on P% than upon Kohlberg's MMS, due, in Rest's (1976) opinion, to the fact that respondents are capable of comprehending advanced moral reasoning before they are capable of spontaneously reproducing it. Therefore, viewing the DIT as a comprehension measure and basing a conversion score upon it would lead to MMS values higher than Kohlberg's.

Evidence presented by Mayshark (1977) and Williams (1979) suggests that moral scores based upon principled moral thinking may poorly discriminate among younger, or delinquent persons. In this study, there is the possibility that the MMS score has been found significant, while P% has not, due to the fact that the proportion of agreement to each moral stage is computed and entered into the MMS calculation. A greater percentage of agreement to statements reflecting Preconventional or lower Conventional moral stage thinking may have resulted in significantly different MMS scores for the two groups.

Hypothesis 1.2. Hypothesis 1.2 explored the relationship of role-taking ability to delinquency. Results presented in Table 8 reveal that

Delinquents are significantly different from Non-Delinquents in the extent to which they display differentiated and reciprocal role-taking ability. While the Delinquent group is characterized by social perspectives which remain predominantly egocentric, the Non-Delinquent group shows considerably more transitional development toward reciprocity and mutuality in social perspective.

A summary of the research findings for Hypotheses Set I reveals Delinquents to be developmentally delayed in relation to Non-Delinquents in cognitive, moral, social and interpersonal domains. It appears that the Delinquents in this study exhibit considerably less Formal Operational thought processes, and display more egocentric moral and social judgements.

A question may be raised at this juncture: How might persons who, theoretically, would be expected to fall near the upper (or lower) limits on all principal measures included in the study, actually score?

In order to test out the criterion-group validity of the test measures, a group of 34 young adults ranging in age from 17 to 23 years, and currently enrolled in a first year junior college program were accessed. These students, who potentially have university eligibility and who have been exposed to basic introductory psychology including cognitive and moral developmental theories would be expected to perform at the highest levels on each of the cognitive, moral and role-taking measures.

Table 12 contrasts the Delinquent, Non-Delinquent and Junior College groups across 20 psychological measures. The junior college sample, averaging approximately 20 years of age, and presumed above-average in intellectual capacity, were scored at the top in four of five cognitive subtests. Variance on CD Total score was attributable principally

TABLE 12
Criterion-Group Validity of Test Measures

	<u>Delinquent</u> (n=84)	<u>Non-Delinquent</u> (n=140)	<u>Junior College</u> ¹ (n=34)
Age	159.0	167.3	238.6
SEI	33.6	50.5	54.1
CD#1 (max.=6)	4.9	5.6	5.94
CD#2 (max.=6)	3.7	4.6	5.20
CD#3 (max.=4)	2.8	3.4	3.61
CD#4 (max.=5)	3.0	4.1	4.82
CD#5 (max.=4)	<u>2.9</u>	<u>3.3</u>	<u>3.97</u>
CD Total(max.=25)	17.3	21.0	23.56
P%	22.4	29.5	41.8
MMS	271.7	291.2	421.2
SPT	1.50	1.92	2.45
Social Maladjustment	60.1	48.0	47.5
Value Orientation	52.3	45.9	40.9
Immaturity	54.7	52.0	60.8
Autism	55.8	47.7	49.3
Alienation	54.1	46.1	45.0
Manifest Aggression	51.7	47.9	40.3
Withdrawal	52.4	52.2	47.5
Social Anxiety	49.8	53.7	48.3
Repression	52.6	53.6	56.4
Denial	48.1	51.4	56.5
<u>Asocial Index</u>	60.1	47.3	46.3

¹Test norms on the Jesness Inventory were available only to age 18. 15 of the 34 junior college students were either 17 or 18 years at time of assessment. Only their JI scores appear here.

to variance on subtest CD#2. The mean sample composite score of 23.56 corresponds to a percent correct rating of more than 94. This would suggest that the thinking of these persons is characterized by consolidated Formal Operations as measured by these multiple-choice measures.

A very marked advance in relation to both adolescent groups in moral insight is noted in scores recorded for both the P% and the MMS measures. P% corresponds closely to values published by Rest (1979a) for persons at this age and educational level. They do illustrate a significant advance in moral thought in relation to the adolescents.

On the social role-taking measure, the junior college students were also seen to score well above both adolescent groups as might be anticipated. Reciprocity in perspective is more commonly seen among this group.

On the delinquency personality measure, the college sample was shown to score lowest on all measures tapping antisocial tendencies (Social Maladjustment, Value Orientation, Autism, Alienation, Manifest Aggression, Asocial Index) (Figure 2). For this contrast, only those junior college students 17 or 18 years of age (n=15) for which Jesness norms were available were analysed. Of interest is the observation that the junior college sample scored most highly on three Jesness measures (Immaturity, Repression, Denial). Examination of item responses in addition to correlations with other psychological Inventory (CPI) shows these scale elevations to tap a strong virtuous, moralistic and prosocial orientation (Table 13).

Hypothesis Set 2. The hypotheses of Set 2 investigated the following: 2.0 examined the correlation of formal operational thinking with level of moral judgement development; 2.1 examined the correlation of formal operational thinking with level of social perspective-taking;

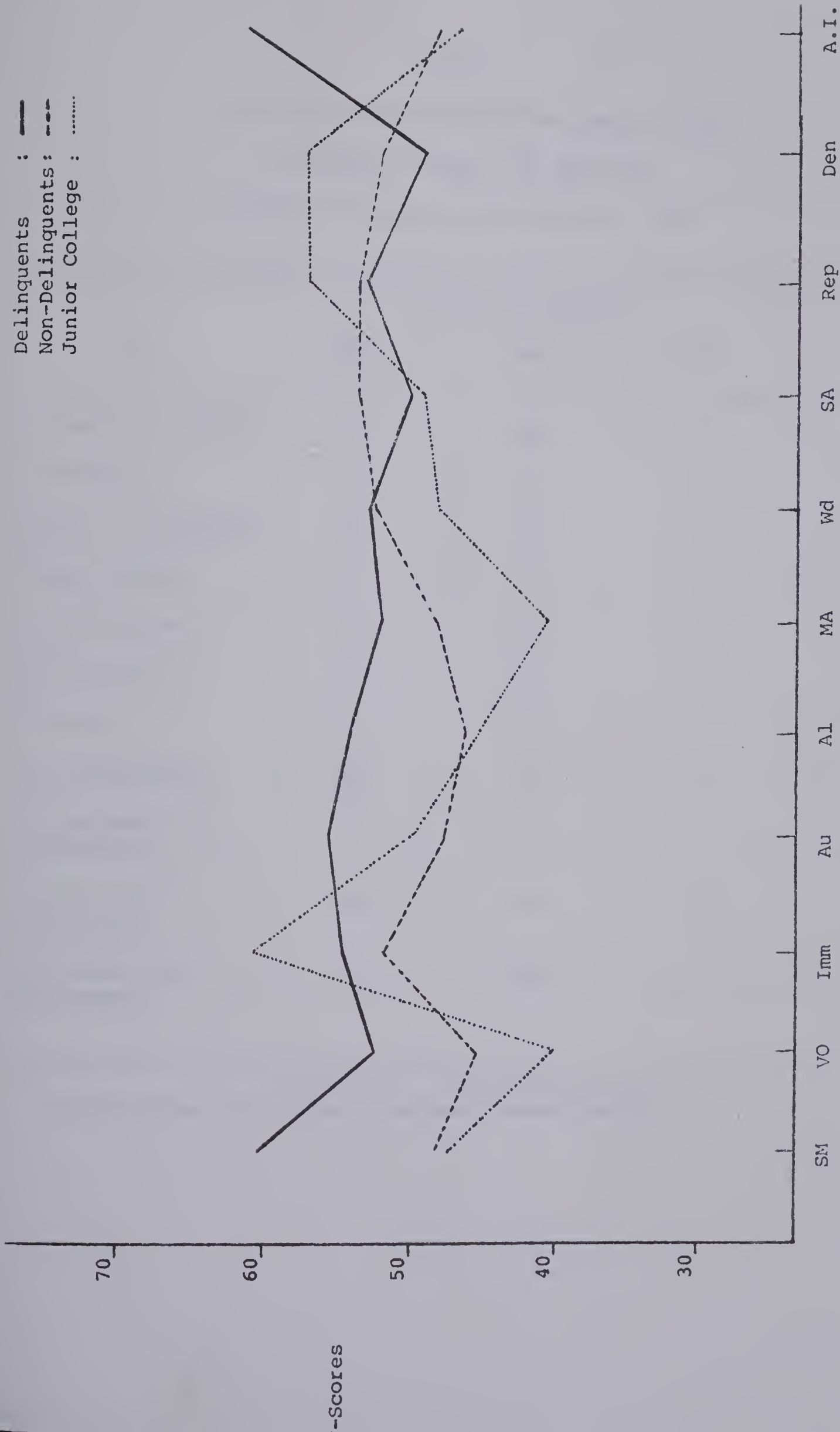


FIGURE 2
Comparison of T-Score Means for Delinquent (n=84)
Non-Delinquent (n=140) and Junior College (n=15) Samples

TABLE 13
Correlations between Selected Scales of the
Jesness Inventory (JI) and the
California Psychological Inventory (CPI)¹

CPI	JESNESS INVENTORY		
	Imm	Rep	Den
Capacity for Status	.09	.25	.41
Sociability	.05	.26	.42
Sense of Well-Being	.06	.27	.49
Responsibility	.19	.26	.40
Socialization	.28	.44	.47
Self-Control	.30	.40	.49
Tolerance	.07	.17	.52
Good Impression	.34	.50	.49
Achievement via Conformance	.24	.40	.47
Intellectual Efficiency	.08	.22	.45
Psychological- Mindedness	.07	.26	.38

¹ Data adapted from Jesness (personal communication)

2.2 examined the correlation of moral judgement development with social perspective-taking level.

For the final samples of 84 Delinquents and 140 Non-Delinquents (N=224) an intercorrelational matrix was conducted for CDT, P%, MMS and SPT. The results of this analysis are listed in Table 14. The table also includes relationships to age and grade. Age and grade revealed significant relationships to all principal developmental variables.

In order to determine the extent of influence of age and grade upon the strength of the correlations between the developmental principal measures, a partial correlational analysis was conducted with simultaneous partialling out of the effects of age and grade. The figures in parentheses in Table 14 report the results of this statistical procedure.

Seen in the table, the interrelationships between cognitive, moral and social role-taking variables ranged from .44 to .66. When age and grade were removed these relationships dropped, ranging from .09 to .60.

The results of the analysis show, in Table 14, that Hypothesis 2.0 was confirmed: a positive correlation was seen to exist between formal operational thinking as measured by a 25-item multiple-choice cognitive development battery and level of moral judgement development. Also, Hypothesis 2.1 was confirmed: a positive correlation was seen to exist between formal operational thinking as measured by the multiple-choice battery, and social perspective-taking level.

Examining Hypothesis 2.2, when contrasting moral maturity with social perspective-taking, correlations of .44 and .51 were recorded for P% and MMS. Partialling out the effects of age and grade dropped the correlations to .09 and .39 respectively. While the MMS conversion score remained significant, it was seen that the relation between SPT and P%

TABLE 14

Intercorrelations for Delinquents and Non-Delinquents on
Selected Developmental Variables¹ (N=224)

	P%	MMS	SPT	CDT	Grade
Age	.32 **	.33 **	.57 ***	.55 ***	.86 ***
Grade	.32 **	.36 **	.59 ***	.72 ***	
<hr/>					
CDT	.54 *** (.36)**	.48 *** (.33)**	.62 *** (.28)*		
SPT	.44 *** (.09)n.s.	.51 *** (.39)***			
MMS	.66 *** (.60)***				

¹Figures in parentheses are partial correlations with the effects of age and grade removed.

* .01 < p < .05
 ** .001 < p < .01
 *** .000 < p < .001

was primarily attributable to the variance in grade level. In this instance it appears that role-taking and principled moral reasoning comprehension are related more to educational and academic advance, than to one common psychological construct.

A summary of the hypotheses which comprised Hypothesis Set 2 reveals that, for the total research sample (N=224), formal operational thinking was positively correlated with level of moral judgement development and with level of social perspective-taking ability (Hypotheses 2.0 and 2.1, respectively, were confirmed). Hypothesis 2.2 was confirmed when level of social perspective-taking was correlated with Moral Maturity Score (MMS) but not when social perspective-taking was correlated with P%. In the latter instance it appeared that the covariance in the scores recorded for social perspective-taking and principle moral reasoning was, to a significant degree a function of chronological age and educational attainment.

I-level Contrasts

Non-delinquent contrasts. Table 15 and Figure 3 report the findings of the analysis for Non-Delinquent groups when they have been divided by I-level classification. Only two I-level classes were formed: 22 were at level I-3 and 118 were at level I-4. Test results show that in all instances, across all developmental variables (cognitive, moral and social), the Non-Delinquents, when divided by I-level, were not significantly different on any of the measures. Figure 3 indicates that the I-3 group scored higher on the Jesness personality trait scales Immaturity, Repression, Denial and Asocial Index. Two of these were determined to be statistically significant: Immaturity ($F = 1.86$, $p < .05$) and Repression ($F = 3.41$, $p < .000$).

Delinquents by I-level. Table 16 details the relationship of

TABLE 15

Non-Delinquent Contrasts by I-level (N=140)

	<u>I-3</u> (n=22)	<u>I-4</u> (n=118)	<u>p</u>
Age (months)	160.3	168.9	n.s.
Age (years)	13.4	14.1	n.s.
Grade	7.5	7.9	n.s.
<u>Cognitive Development Tests:</u>			
CD#1	5.3	5.7	n.s.
CD#2	4.2	4.6	n.s.
CD#3	3.4	3.4	n.s.
CD#4	3.7	4.2	n.s.
<u>CD#5</u>	<u>2.4</u>	<u>3.4</u>	n.s.
CD Total	19.0	21.4	n.s.
<u>Moral Development Tests:</u>			
P%	24.8	31.2	n.s.
MMS	277.1	295.9	n.s.
<u>Social Perspective Taking:</u>			
SPT	1.88	1.97	n.s.
<u>Jesness Inventory:</u>			
Social Maladjustment	49.8	47.6	n.s.
Value Orientation	46.5	45.6	n.s.
Immaturity	60.2	50.4	*
Autism	46.3	48.3	n.s.
Alienation	45.7	45.3	n.s.

	<u>I-3</u> (n=22)	<u>I-4</u> (n=118)	p
Manifest Aggression	48.3	47.7	n.s.
Withdrawal	50.7	53.1	n.s.
Social Anxiety	50.7	54.8	n.s.
Repression	65.1	51.4	***
Denial	55.8	50.1	n.s.
ASOCIAL INDEX	50.7	46.7	n.s.

* .01 < p < .05
 ** .001 < p < .01
 * * * .000 < p < .001

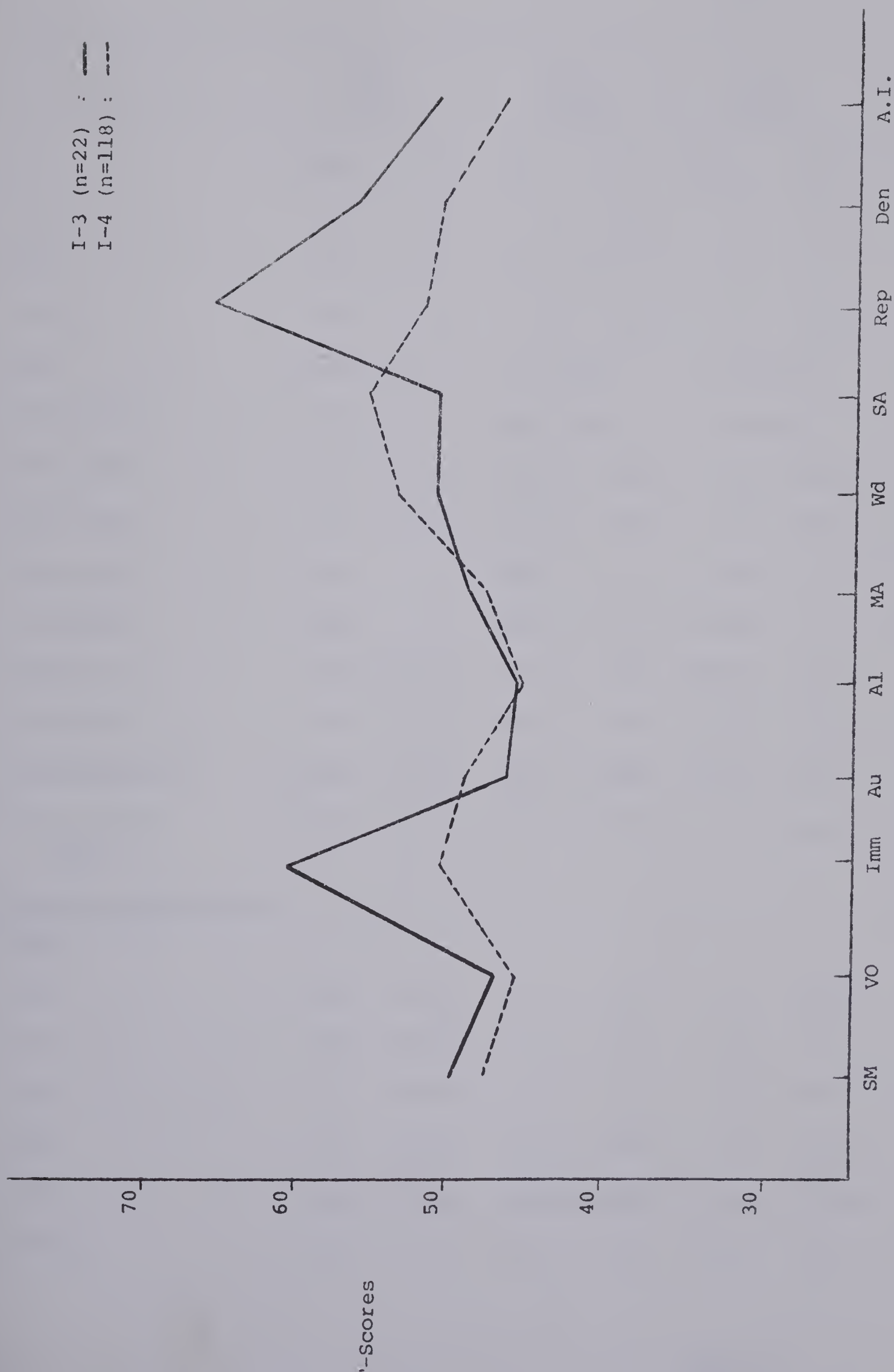


FIGURE 3

Comparison of Jesness Inventory T-Score Means
for Non-Delinquents by I-level

TABLE 16

Delinquent Contrasts by I-level (N=84)

	<u>I-2</u> (n=26)		<u>I-3</u> (n=34)		<u>I-4</u> (n=24)		p
Age	144.5	(26.5)	163.3	(18.5)	161.0	(20.7)	**
Grade	4.9	(2.5)	5.9	(3.1)	7.0	(1.9)	*
SEI	28.4	(14.8)	26.9	(19.3)	33.4	(17.3)	n.s.
Setting	2.4	(1.9)	3.6	(1.8)	3.1	(2.3)	n.s.
Race	100% white		71% white		84% white		n.s.
Rural/Urban	77% city		70% city		75% city		n.s.
Birth Order	2.2	(1.2)	2.0	(1.4)	2.0	(1.3)	n.s.
Family Size	3.5	(1.4)	2.9	(1.8)	2.8	(1.8)	n.s.
Broken Home	77%		65%		84%		n.s.
Hx Criminal	40%		53%		42%		n.s.
Verbal I.Q.	93.0	(11.6)	84.6	(7.8)	100.2	(5.5)	--
Non-Verbal I.Q.	97.8	(17.2)	89.0	(8.7)	94.3	(5.4)	--
Full Scale I.Q.	94.1	(11.3)	88.5	(12.5)	104.0	(13.5)	n.s.
Educ. Retard. (mos.)	11.5	(13.6)	10.2	(18.3)	5.7	(15.6)	n.s.
<u>Cognitive Development</u>							
<u>Tests</u>							
CD#1	4.7	(1.1)	4.9	(1.1)	5.4	(0.9)	(.06)
CD#2	2.8	(1.2)	3.8	(1.2)	4.5	(1.0)	***
CD#3	2.3	(1.1)	2.9	(1.1)	3.2	(0.8)	*
CD#4	2.1	(1.2)	3.3	(1.4)	3.9	(1.1)	***
CD#5	<u>2.3</u>	<u>(0.9)</u>	<u>3.0</u>	<u>(1.1)</u>	<u>3.5</u>	<u>(0.6)</u>	***
CD Total	14.3	(3.6)	17.9	(4.5)	20.5	(2.5)	***

(cont'd)

	<u>I-2</u> (n=26)		<u>I-3</u> (n=34)		<u>I-4</u> (n=24)		<u>p</u>
<u>Moral Development Tests</u>							
P%	11.9	(5.6)	23.7	(13.9)	31.9	(13.5)	***
MMS	247.8	(36.4)	270.2	(48.3)	299.8	(41.2)	***
<u>Social Perspective Taking</u>							
SPT	1.4	(0.4)	1.5	(0.4)	1.8	(0.4)	**
<u>Jesness Inventory</u>							
Social Maladjustment	57.5	(11.1)	59.2	(8.2)	55.0	(10.2)	n.s.
Value Orientation	52.4	(10.1)	50.4	(11.8)	47.6	(11.8)	n.s.
Immaturity	55.0	(4.5)	53.5	(8.2)	47.8	(7.6)	**
Autism	54.0	(7.0)	51.8	(6.4)	54.3	(8.5)	n.s.
Alienation	51.5	(10.3)	52.2	(11.5)	48.0	(9.9)	n.s.
Manifest Aggression	54.8	(10.4)	50.3	(8.2)	46.8	(12.1)	*
Withdrawal	51.3	(8.1)	55.0	(10.1)	52.1	(7.1)	n.s.
Social Anxiety	54.0	(8.5)	52.0	(8.9)	52.1	(12.0)	n.s.
Repression	53.7	(6.4)	54.7	(11.7)	47.6	(9.4)	*
Denial	49.3	(8.5)	47.4	(6.6)	46.7	(12.9)	n.s.
ASOCIAL INDEX	56.0	(11.5)	62.5	(10.3)	57.4	(7.2)	*

Standard deviations in brackets

* .01 < p < .05

** .001 < p < .01

*** .000 < p < .001

Delinquents (across 34 variables) when classed by levels I-2, I-3 and I-4. It is seen that Delinquents grouped by I-level differ significantly in age. Offenders classed in the I-2 group are the youngest of the three groups. I-3's and I-4's did not differ significantly in age. Tables 17 and 18 detail the one-way analysis of variance with post-hoc Scheffé pairwise contrasts for the groups. Only the I-2/I-3 contrast proved significant.

The groups were also seen to differ significantly in educational level (Table 19). This difference may be expressed as a function of the age difference as noted. Table 20 shows that only one pairwise post-hoc contrast (I-2/I-4) was significant.

The three Delinquent groups were not found to differ significantly on any of the following variables:

Socioeconomic status: Scores on Blishen's Socioeconomic Index for Occupations in Canada (1967) range on a continuous scale from 25.36 to 76.69. All of the delinquent I-level groups were found to fall within the lower limit of this socioeconomic scale (28.4, 26.9, and 33.4 respectively, for levels I-2, I-3 and I-4).

Race: All group members were predominantly white in racial origin. The I-2 group was in fact, wholly Caucasian.

Locale: Approximately 3 out of 4 offenders in all I-level classes were resident in urban centres.

Birth Order and Family Size: To assess the oft-noted observation that later born, "middle" children tend to be more susceptible to behavioural disruptions (according to Adlerian theory) (Nield, 1976), data regarding these variables was obtained. Test results showed that none of the delinquent groups differed significantly in order or birth or in family size.

TABLE 17

Analysis of Variance: Delinquent I-level
Groups and Age

Source	df	<u>MS</u>	<u>F</u>	<u>P</u>
Groups	2	2501.0	5.20	0.007
Error	81	481.27		

TABLE 18

Probability Matrix for Scheffé Multiple Comparison
of Means: Delinquent I-level Groups and Age

	I-2	I-3	I-4
I-2	1.00	0.01	0.07
I-3		1.00	0.84
I-4			1.00

TABLE 19
Analysis of Variance: Delinquent I-level
Groups and Grade

Source	df	<u>MS</u>	<u>F</u>	<u>p</u>
Groups	2	26.92	3.81	0.026
Error	81	7.06		

TABLE 20
Probability Matrix for Scheffé Multiple Comparison
of Means: Delinquent I-level Groups and Grade

	I-2	I-3	I-4
I-2	1.00	0.344	0.026
I-3		1.00	0.332
I-4			1.00

Broken Home: It can be seen that for all groups, an overwhelming majority were resident in homes where either one or both parents were absent (juvenile placed in foster home, for example). With the exception of the I-3's, less than 1 in 4 families were still intact with both parents present. While not statistically significant, the observation that the highest percentage of disrupted families occurred within the I-4 group may be of psychological relevance given that a majority of persons in this class are considered neurotic and ego-impaired.

History of criminal conduct: Differences between I-level groups on this measure were not statistically significant and may be due, in part, to the fact that recording procedures were not standardized and accurate records were not always kept. In addition, the disposition of youthful offenders who are detained by police has not always resulted in court appearance, nor would that contact necessarily have made itself known in the student's social and historical record. The opportunity for many delinquent acts to have gone unrecorded was so great as to make the accuracy of this measure of dubious.

Intellectual and educational achievement: Statistical tests were not conducted for Verbal or Non-Verbal I.Q. scores due to incomplete data entries. None of the groups were found to be significantly different in intellectual ability as measured by the Full Scale I.Q. score. The I-4 group scored most highly in Full Scale I.Q., corresponding to a percentile rank of approximately 62. Percentile ranks for the lower I-levels fell at 17 for I-3's and 32 for I-2's. Andrew (1974) reported that I-2's tend to display the greatest discrepancy in Verbal/Non-Verbal scores while I-4's display negligible discrepancies. Her observations were not supported in this study.

Data regarding extent of educational retardation shows that there is a linear relationship between I-level and months of scholastic lag. These figures while not statistically significant, conform to grade placements reported for the I-levels in Table 16.

Hypothesis Set 3. Table 16 illustrates the finding that a linear relation exists between I-level and extent of Formal Operational thought processes as measured by the test questionnaire. The I-2 group was seen to correctly answer 57 percent of the items; the I-3 group, 64 percent; and the I-4 group, 81 percent. For the latter group the % correct value corresponds to scores for the Non-delinquent sample. They appear to be the most advanced in terms of Piagetian Formal Operations.

Hypothesis 3.0 anticipated a positive relationship of Formal Operational thinking to I-level classification. Results confirmed that hypothesized relationship (Table 21). While the I-4 group was noted to score highest in intellectual capacity (expressed as I.Q. score) it was not statistically significant and cannot be considered in itself to account for the group differences in Formal Operational thought. Scheffé post-hoc pairwise contrasts (Table 22) revealed all contrasts to be statistically significant.

Hypothesis 3.1 predicted a positive relationship of moral judgement to I-level classification. Tables 23 and 24 and 25 and 26 show the results of this test. Results indicate a linear relationship between I-level and P% ($p < .001$) and I-level and MMS ($p < .001$). Post-hoc Scheffé contrasts indicated that, for the P% scores, all pairwise contrasts were statistically significant. For the MMS score two of three contrasts proved to be statistically significant. The I-2/I-3 contrast was not. These results confirm the second I-level hypothesis.

TABLE 21

Analysis of Variance: Delinquent I-level Groups
and Cognitive Development Total (CDT)

Source	df	<u>MS</u>	<u>F</u>	<u>p</u>
Groups	2	239.74	16.93	0.000
Error	81	14.16		

TABLE 22

Probability Matrix for Scheffé Multiple Comparison
of Means: Delinquent I-level Groups and
Cognitive Development Total (CDT)

	I-2	I-3	I-4
I-2	1.00	0.002	0.000
I-3		1.00	0.038
I-4			1.00

TABLE 23

Analysis of Variance: Delinquent I-level
Groups and P%

Source	df	<u>MS</u>	<u>F</u>	<u>P</u>
Groups	2	2542.75	18.02	0.000
Error	81	141.12		

TABLE 24

Probability Matrix for Scheffé Multiple Comparison
of Means: Delinquent I-level Groups and P%

	I-2	I-3	I-4
I-2	1.00	0.001	0.000
I-3		1.00	0.040
I-4			1.00

TABLE 25

Analysis of Variance: Delinquent I-level Groups
and Moral Maturity Score (MMS)

Source	df	<u>MS</u>	<u>F</u>	<u>p</u>
Groups	2	16922.50	9.18	0.000
Error	81	1844.41		

TABLE 26

Probability Matrix for Scheffé Multiple
Comparison of Means: Delinquent I-level
Groups and Moral Maturity Score (MMS)

	I-2	I-3	I-4
I-2	1.00	0.140	0.000
I-3		1.00	0.041
I-4			1.0

Hypothesis 3.2 anticipated a positive relationship of social perspective-taking ability to I-level classification. Tables 27 and 28 illustrate the findings of this statistical comparison. The results suggest differences between groups in a direction predicted by theory and the magnitude of the difference is shown to be significant overall ($p < .01$), while post-hoc Scheffé contrasts show that only the I-2/I-4 pairwise contrast was significant.

A summary of the hypotheses which were advanced for Hypothesis Set 3 reveals the following:

Delinquent groups which were scored at differing Interpersonal Maturity levels appeared to differ significantly in extent of formal operational thinking. Hypothesis 3.0 was therefore confirmed, as it was seen that the delinquents at the highest Interpersonal Maturity level scored well above either of the lower I-level groups in formal operational thought.

Delinquent groups which were scored at differing Interpersonal Maturity levels appeared to differ significantly in principled moral reasoning comprehension. Hypothesis 3.1 was therefore confirmed, as it was seen that the delinquents at the highest Interpersonal Maturity level scored well above either of the lower I-level groups in moral judgement development.

Delinquent groups which were scored at differing Interpersonal Maturity levels appeared to differ significantly in reciprocal role-taking ability. Hypothesis 3.2 was therefore confirmed as it was seen that the delinquents at the highest Interpersonal Maturity level scored well above either of the lower I-level groups in reciprocal perspective-taking level.

TABLE 27

Analysis of Variance: Delinquent I-level Groups
and Social Perspective-Taking (SPT)

Source	df	<u>MS</u>	<u>F</u>	<u>p</u>
Groups	2	0.77	5.16	0.007
Error	81	0.15		

TABLE 28

Probability Matrix for Scheffé Multiple Comparison
of Means: Delinquent I-level Groups and
Social Perspective-Taking (SPT)

	I-2	I-3	I-4
I-2	1.00	0.675	0.011
I-3		1.00	0.059
I-4			1.00

Jesness inventory analysis. Analysis of the psychological trait scales of the Jesness Inventory revealed significant differences between the Delinquent I-level groups on four of the scales: Immaturity, Manifest Aggression, Repression and the discriminant function Asocial Index (Table 16 and Figure 4). Post-hoc Scheffé pairwise contrasts revealed that, for Immaturity, I-2's and I-3's differed significantly from the I-4's (I-4's scoring lowest).

For Manifest Aggression only I-2's differed significantly from I-4's (I-2's scoring higher).

For Repression only I-3's differed significantly from I-4's (I-3's scoring higher).

For Asocial Index only I-2's differed significantly from I-3's (I-3's scoring higher).

Table 29 presents the results of the correlative analysis of Interpersonal Maturity Level and selected developmental and demographic variables. Significant correlations are reported between I-level classification and each of the cognitive, moral and role-taking variables, as well as to age and grade, but not with intelligence, socioeconomic-index or educational retardation.

Owing to the significance of the age and grade effect in the correlations reported, partial correlational analyses were conducted between I-level classification and each of the principal developmental variables, partialling out their effects sequentially. Table 30 presents the results of this analysis. Correlations between I-level and cognitive and moral development variables remained significant when the moderating influences of age and grade were removed. The relationship of I-level to social perspective-taking remained significant when the effect of age was removed,

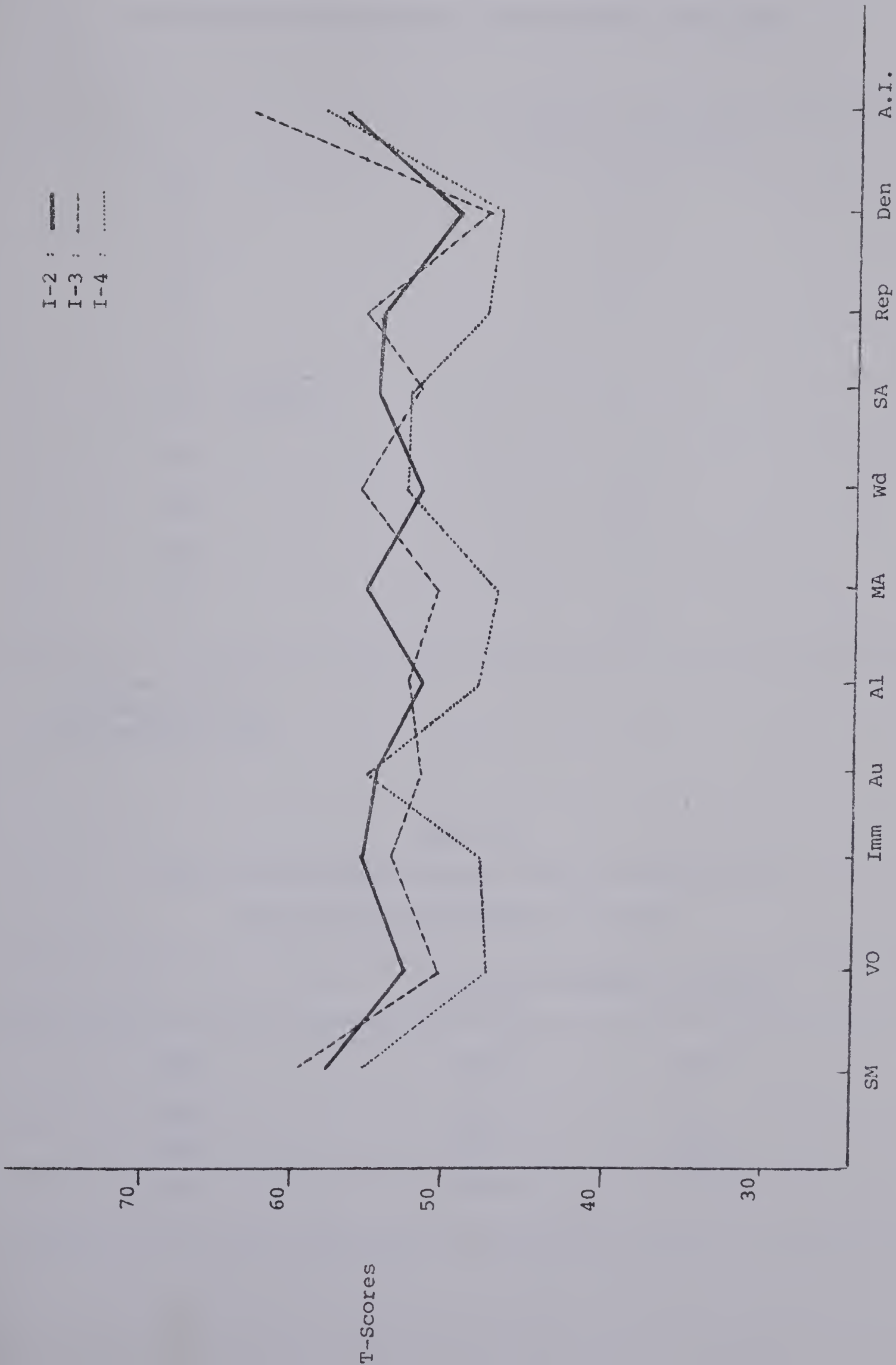


FIGURE 4
Comparison of Jesness Inventory T-Score Means
for Delinquents by I-level

TABLE 29

Correlations between I-level Classification
and Selected Developmental and Demographic Variables

I-level Classification	
Age	.25*
Grade`	.29*
SEI	.10
I.Q.	.20
Educ. Retard.	-.13

CDT	.54***
SPT	.33**
MMS	.43***
P%	.55***

* .01 < p < .05
** .001 < p < .01
*** .000 < p < .001

TABLE 30

Partial Correlations between I-level Classification
and Selected Developmental Variables

	I-level	
	w/o Age	w/o Grade
CDT	.51***	.49***
SPT	.22*	.20
MMS	.35**	.34**
P%	.52***	.51***

but not for grade. Evidently, the relation between I-level classification and role-taking as measured in this study is, to a significant degree, a function of educational advance. The results, taken collectively, suggest that while both age and educational advance are important developmental components neither account for the magnitude of the relationship between I-level and the principal developmental variables.

To assess the extent to which age, grade or I.Q. may have influenced significances reported in analyses of variance between I-level groups and major developmental variables, analyses of covariance were attempted.

Homogeneity of regression tests proved to be significant at $p < .01$ which did not permit the rescaling of scores as the slopes of the regression lines for each of the I-level groups were not conformable. It must be assumed that age and grade and I.Q. differ in each I-level group in the extent to which they influence ones' scores on the developmental variables. Accordingly, analyses of covariance were not pursued due to violation of the homogeneity of regression assumption.

Ancillary Statistical Analyses

Noting results which have reported robust relationships between cognitive, moral and role-taking measures, a factor analysis has been conducted on all of the variables gathered for each subject in the Delinquent sample. These measures included demographic, sociological, psychological, and principal developmental variables. Using Pearson product-moment correlations, an intercorrelation matrix from 34 measures was computed. This matrix was then subjected to a Principal Axis analysis and six eigenvalues with scores greater than 1.00 were extracted. It was decided to use Cattell's scree test to determine the number of components

for further interpretation. Five principal component vectors were rotated in accordance with the Varimax criterion, Kaiser's strict limit being applied (Kaiser, 1958). An examination of the resulting factor loadings of the variables in five factors gave a factor structure considered suitable for interpretation.

Table 31 illustrates the results of this analysis. Five common factors account for 88% of the total variance in the scores. A description of each of these factors follows.

Factor I, accounting for 28.7% of the total variance, has been termed an 'anti-social-aggressive' delinquency measure. Variables loading most highly on this factor include the Jesness personality scales: Social Maladjustment (SM), Value Orientation (VO), Autism (Au), Alienation (Al), Manifest Aggression (MA) and Denial (Den). As reported in previous research, this factor consistently emerges in analyses of delinquents' protocols. Behaviour and attitudes which are tapped by these trait scales identify persons who: feel unhappy, worried, mistrustful; who consciously acknowledge strong feelings of hostility, and readily blame others for personal problems; who cannot accept criticism; react with physical aggression in interpersonal conflicts and who commonly display unsatisfactory peer relations. Persons high on these scales tend to over-evaluate their abilities and strengths, to deny personal problems but do recognize considerable conflict with parents mainly over their elders' perceived overregulation for their conduct. Potentiality for delinquency and for interpersonal conflict expressed in acting-out, possibly aggressive ways is implied in this factor.

Factor II accounting for 27.1% of total variance, may be termed a 'general developmental' factor. Each of the following variables load

TABLE 31

Factor Analysis of Delinquents Scores Across
Demographic, Sociological, Psychological and
Developmental Variables¹

Variables	Factor Loadings ²					h ²
	I	II	III	IV	V	
I-Level	-112	396	503	079	-121	445
C.D.#1	-035	303	109	567	057	438
C.D.#2	054	595	409	274	127	734
C.D.#3	-102	460	228	071	-108	295
C.D.#4	-057	627	145	496	-261	745
C.D.#5	-047	659	249	298	-246	667
C.D. Total	-060	765	325	530	-120	992
MMS	-091	372	632	051	056	558
P%	172	227	855	101	-012	907
SPT	-055	721	146	097	083	569
Social Maladjustment	872	036	-016	059	477	995
Value Orientation	945	017	-040	-150	-187	971
Immaturity	015	-195	-165	-090	500	359
Autism	632	055	-096	-076	203	463
Alienation	767	-039	218	-065	018	643
Manifest Aggression	840	-087	-272	236	-171	873
Withdrawal	523	092	012	119	033	366
Social Anxiety	299	-098	-258	026	-376	324
Repression	-207	-256	010	-192	442	345
Denial	-882	-153	-100	052	283	901
Asocial Index	196	086	060	100	614	455

Variables	Factor Loadings ²					h ²
	I	II	III	IV	V	
Age	186	879	006	-018	071	831
Grade	211	835	085	172	008	783
Race	263	074	267	-290	-004	403
R/U Residence	252	016	216	270	-273	261
I.Q.	-059	-119	027	-232	070	078
Birth Order	313	026	-158	091	-082	550
Family Size	132	-300	-107	036	-036	836
Hx Criminal	101	-010	081	-185	016	144
Broken Home	034	-089	-075	-665	-017	461
% Total Variance	28.7	27.1	12.5	10.8	9.3	

¹Principal Axis solution, Varimax rotation with iterations.

²Decimal points omitted.

upon this factor: I-level, age, grade, CD#1, CD#2, CD#3, CD#4, CD#5, CD Total, Moral Maturity Score (MMS), P% and SPT. Family Size is negatively related on this factor. This factor would appear to confirm that each of the cognitive, moral and social role-taking measures which have been included in the questionnaire do in fact emerge as structural components in a general developmental factor correlating with advance in chronological age.

Factor III accounting for 12.5% of total variance in scores is termed a 'socio-moral reasoning' factor with highest loading on MMS, P% and I-level. MMS and P% are not independent measures, MMS actually being a mathematical reformulation of information utilized in P% calculation.

Factor IV accounting for 10.8% of total variance has significant loadings on variables CD#1, CD#4, and CD Total. Owing to the importance of adult-style logical advance and information-processing abilities, this factor may be termed a perceptual-intellectual factor. It involves the application of abstract conceptual reasoning and problem-solving abilities. There are no significant loadings on any of the other 26 remaining variables. A high negative loading on Variable #34 (Broken Home) would not appear to have any meaningful psychological interpretation. It emerges as an artifact of the scaling procedure employed, or of sampling error.

Last, Factor V which accounts for 9.3% of variance has been termed a 'socialized-manipulator' delinquency factor with significant loadings seen on Jesness psychological trait scales: Social Maladjustment (SM), Immaturity (Imm), Repression (Rep), and Asocial Index (AI). Earlier, the Junior College sample was seen to score most highly on Immaturity, Repression and Denial which correlated on the CPI with measures highlighting a very pro-

social, interpersonally astute and morally responsible character. Here however, additional loadings on SM and A.I. reveal that while the adolescents in this analysis may have good prosocial skills and facile interpersonal conduct, they will utilize positive social contact in an exploitative manner for personal gain and advantage. Their commitment to responsible moral and ethical behaviour is likely very low.

These five factors, in combination, account for almost 90% of the variance in test scores across 30 disparate variables. A general developmental factor has been identified in addition to more specific moral and cognitive factors. Two delinquency predisposing dimensions were highlighted--one an antisocial-aggressive, the other prosocial-manipulative.

Jesness inventory factor structure. The factor analysis reported in Table 31 was conducted with the Delinquent sample of 84 subjects and included a broad range of variables simultaneously. As might have been anticipated, personality variables appeared interrelated; cognitive and socio-cognitive variables were also interrelated. At least two personality dimensions emerged which were interpreted as predisposing to delinquency and asocial conduct.

In order to examine more fully the psychological, personality characteristics of adolescents in the sample, the total research sample size of 224 subjects was utilized and variables pertaining only to the Jesness inventory scales were entered into a subsequent factor analysis. Table 32 lists the results of this analysis.

Factor I, which accounts for 45% of total variance is consistent with that factor identified in Table 31 earlier. It has once again been termed an antisocial-aggressive delinquency factor.

Factor II is similar in content to Factor V in Table 31. In this

TABLE 32

Factor Analysis of Delinquents and Non-Delinquents (N=224)
on the Jesness Psychological Inventory including I-level¹

	Factor Loadings ²			h ²
	I	II	III	
I-level	009	-610	-095	381
Social Maladjustment	644	099	736	966
Value Orientation	884	-122	252	859
Immaturity	053	673	139	475
Autism	541	-009	185	327
Alienation	889	102	-158	825
Manifest Aggression	696	-071	-049	492
Withdrawal	035	-328	624	498
Social Anxiety	-057	-474	218	276
Repression	-309	737	-085	645
Denial	-621	550	-160	713
Asocial Index	029	187	783	649
Percent Total Variance	45%	29%	25%	

¹Principal Axis solution, Varimax rotation with iterations.

²Decimal points omitted.

analysis however, I-level has entered with a high negative loading. This may be due to the influence of 140 Non-Delinquents for whom only two I-level classifications were made. Therefore, this factor may characterize persons at the lower of these two levels, level I-3.

Factor III accounting for 25% of total variance, reveals loadings on trait scales Social Maladjustment and Withdrawal and the discriminant function Asocial Index. This factor has been termed a depressed-neurotic delinquency factor. Features characterizing persons scoring highly on these scales include tendencies to isolate self from others; acknowledge feelings of sadness, depression, of being misunderstood or unfairly treated; preferring to be alone, and displeased with overt aggression and hostility. Moreover, such persons appear uncomfortable interpersonally; they may appear unduly nervous or sensitive. In view of high loadings on SM and A.I. such persons would not necessarily be seen as simply neurotic but possibly delinquent as well for the latter scales would predispose them to act-out their frustrations in antisocial ways. They appear more personally troubled than delinquents in the Factor I grouping. Delinquency for the Factor III group may be termed ego-dystonic and for the Factor I group ego-syntonic.

Comparison of the three Jesness factors identified in Table 32 to the I-level configurations for Delinquents and Non-Delinquents seen in Figures 3 and 4 has been illuminating.

For the Factor I group: antisocial-aggressive, no apparent relation to I-level classes can be inferred aside from the high scores on Social Maladjustment and Manifest Aggression for the Delinquent I-2's.

Factor II: prosocial-manipulative, appears similar to the I-3's, especially among the Non-Delinquent sample, who score most highly on Immaturity, Repression and Denial. These scales reflect persons who pro-

ject images of themselves as virtuous, moral and friendly persons and who place considerable emphasis upon cordial interpersonal relations. Three subclasses among the I-3 classification include those termed Cultural Conformists; those termed Immature Conformists and those termed Manipulators. For each of these subclasses, positive adult and peer contacts appear to be important, although for differing reasons.

Factor III: depressed-neurotic, may be related for the I-4 subjects. Both of the Delinquent and Non-Delinquent samples score highly on Withdrawal and Social Anxiety scales within their own groups. These elevations suggest persons who are more personally distressed, are consciously unhappy with their lives and are overly sensitive to others' evaluations of them. Subclasses for the I-4's include two which are neurotic. Possibly, Jesness Factor III identifies those persons who could be categorized within the neurotic subclasses of Interpersonal Maturity Level I-4.

The factor analysis of Jesness protocols for the whole research sample has delineated three seemingly unique psychological types. Through examination of both attitudinal and behavioural characteristics for each type, an association can be drawn between two of three factors and two of three Interpersonal Maturity Levels.

Identification of invalid protocols. Following the completion of data collection, feedback obtained directly from research subjects, and from proctors, in addition to a visual examination of test protocols, strongly suggested the possibility of intentional lack of cooperation in filling out the questionnaire by many subjects in the Delinquent sample. In view of the importance of retaining as many data sets as possible, a series of procedures were followed in order to identify those data sets which could not be considered valid or usable in the tests of major hypotheses.

In the identification of randomly answered, dissembled questionnaires, Invalidation Weights were applied to each sample subjects' protocols based upon both empirical and subjective analytic criteria. Visual scan identified those protocols which were left incomplete or which had very obviously been responded to without due care and consideration (for example, all 155 Jesness personality questions answered all True, or all False or displaying an unbroken TFTF pattern). The data sets were ejected for all persons whose questionnaires displayed any of these features.

Cognitive development measure. Questionnaires where CDT scores fell two standard deviations or more below the group mean were given an Invalidation Weighting of 1. This criterion took into consideration the age of respondent and the I.Q. score reported. Inconsistencies (for example, I.Q. and age at or above group mean values) confirmed the possibility of a carelessly answered cognitive battery.

Moral development measure. Rest (1979b) has reported two internal checks on subject reliability for the DIT. The first, an M-score is based upon the percent of agreement with nonsensical items which are included among the issue statements for each moral dilemma. Persons obtaining a raw score higher than 4 on the short form of the DIT are considered to have responded more favorably to items which possessed a lofty and complex tone but were known to be meaningless.

Rest's Consistency Check is based upon minimal heterogeneity in preference for issue statements. Rest has recommended ejecting protocols which show consistency scores above 8 for the short-form DIT. Such scores reflect no variance in preference over the dozen issue statements in each moral dilemma. The Consistency Check identifies those persons who may have not read items carefully or responded in an imprecise and careless manner.

Questionnaires scored 4 or above on M and 8 or above on the Consistency Check were assigned an Invalidation Weight of 1.

Role-taking measure. For the social perspective-taking measure, incomplete or omitted responses to the open-ended questions resulted in the ejection of the data set for that test subject.

Jesness personality assessment. The identification of invalid Jesness protocols has proven most challenging. Several empirical statistical programs were developed to assist in this identification.

First, Jesness responses which appeared to be random, based upon a subjective visual scan, were given a preliminary visual scan score (Invalidation Weight) of 1. An example would be Jesness protocols which revealed long, repeating columns of all True and all False answers.

Next, 10 associates of the principal investigator were each given two standard Jesness answer sheets and requested to randomly fill in responses, without reading the items and to attempt to conceal the fact that they were confabulating their responses on the personality measure.

A computer program, formatted in APL language, was then written at the University's Division of Educational Research Services which permitted the computer-assisted generation of 80 random Jesness Inventory profiles. These were then added to the associates' random protocols.

Three data sets were subsequently grouped. The total original sample of 156 Non-Delinquent Jesness protocols constituted one group. Fifteen junior college Jesness protocols comprised a second group, while the 100 Random Jesness profiles formed the third and last group. A multiple group discriminant function was then conducted generating statistical weights which would permit maximum separation of each of the three groups from one another. Two discriminant vectors accounted for 84% and 15% of the total

variance respectively (Table 33). Excellent separation between the group was apparent ($F(20,540)=32.69, p<.000$). Both discriminant roots were shown to be significant (Root 1, $\chi^2(20)=432.43, p<.000$; Root 2, $\chi^2(9)=99.94, p<.000$).

Utilization of both discriminant functions resulted in two discriminant score means for each of the three groups. Figure 5 illustrates the calculation which allowed separation in two-dimensional discriminant space. The Jesness scores for each Delinquent sample subject were entered into both discriminant functions and their resulting scores charted. Delinquent protocols which were shown to conform to randomly responded Jesness protocols were then assigned an Invalidation Weight of 3.

A final statistical procedure utilized 100 random Jesness profiles in a stepwise multiple regression procedure with regression of 10 psychological traits scales on the discriminant function Asocial Index. A T-score mean of 47.92 was computed for the random Asocial Index. Nine of the ten Jesness scales entered the regression equation which accounted for 80% of the total variance in Asocial Index scores. The vector of regression weights was found to be significant, $F(9,90)=29.81, p<.000$. Table 34 lists the beta weights utilized in the regression equation.

Jesness data for each of the Delinquent and Non-Delinquent sample subjects were entered into this equation. Scores which fell within 1 Standard Error (± 1.33) of the Random Asocial Index were assigned an Invalidation Weight of 2 (Table 35).

Following the tabulation of subject response reliability scores all data sets which had received a composite score of 3 or more points were ejected from the final tests of hypotheses. It was considered that the group discriminant function most powerfully identified dissimulated profiles and responders, consequently a positive score on this measure alone

TABLE 33

Multiple Group Discriminant Function Weights:
Sample Subject Reliability Analysis

Jesness Scale		Normalized Weights	
		1st D.F.	2nd D.F.
Social Maladjustment	(SM)	0.668	0.604
Value Orientation	(VO)	-0.254	0.070
Immaturity	(Imm)	0.453	-0.420
Autism	(Au)	0.302	-0.392
Alienation	(Al)	0.097	0.236
Manifest Aggression	(MA)	-0.221	0.408
Withdrawal	(Wd)	-0.182	0.126
Social Anxiety	(SA)	0.045	0.129
Repression	(Rep)	0.185	0.104
Denial	(Den)	-0.249	0.178
% Total Variance		84.4	15.6

$F = 32.69, p < .000$

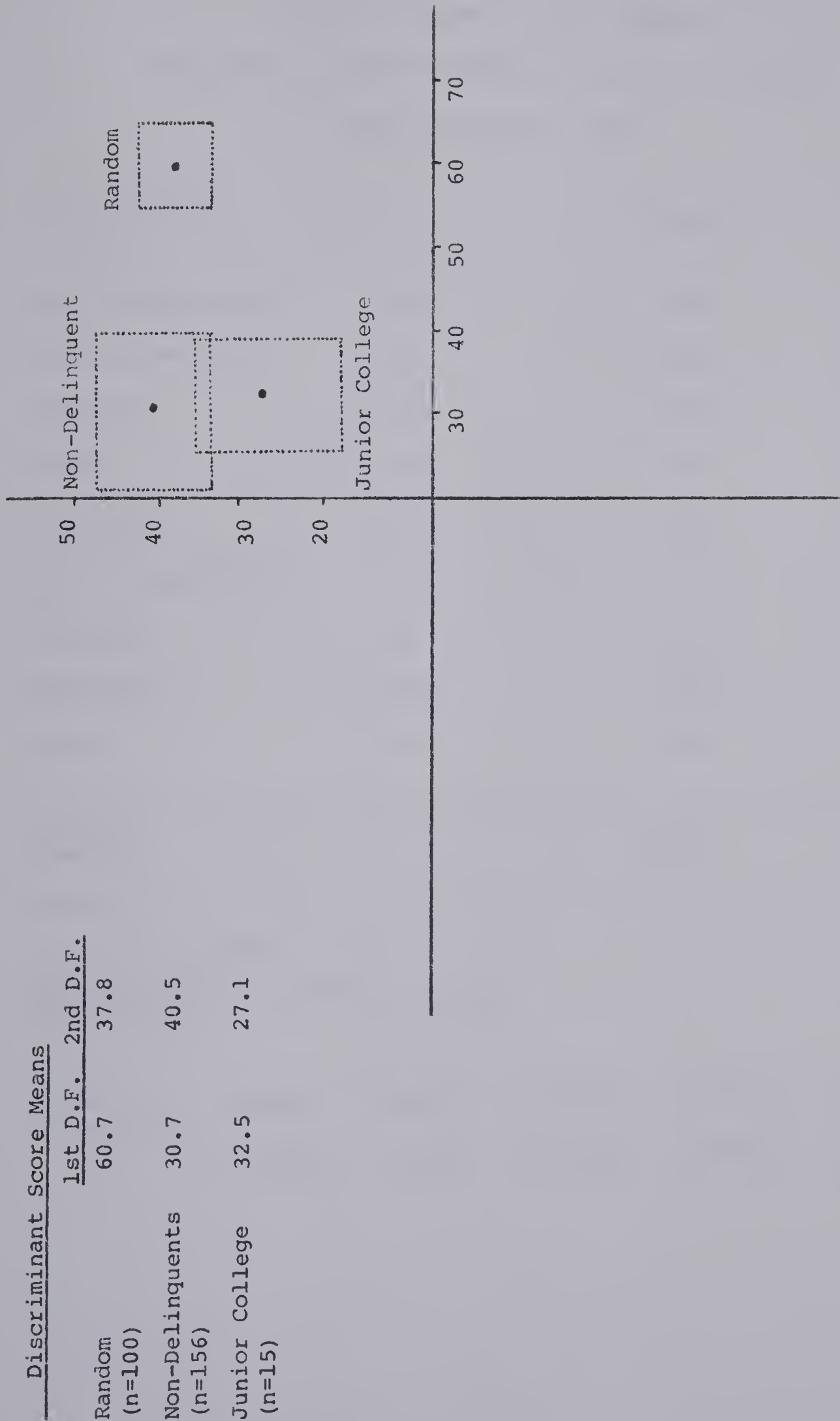


FIGURE 5
Discriminant Score Means for Three Groups
in Two-Dimensional Discriminant Space

TABLE 34

Multiple Regression Beta Weights:
Regression of Random Jesness Personality Inventory
Traits on Asocial Index

Jesness Trait		Weights
Social Maladjustment	(SM)	0.035
Value Orientation	(VO)	-0.148
Immaturity	(Imm)	0.053
Autism	(Au)	0.239
Alienation	(Al)	0.299
Manifest Aggression	(MA)	0.163
Withdrawal	(Wd)	-0.217
Repression	(Rep)	-0.010
Denial	(Den)	-0.018
Constant		20.15

$\underline{F} = 29.84 \quad p < .000$

Random Asocial Index Mean = 47.92

Standard Error = ± 1.33

Random A.I. = .035(SM) - .148(VO) + .053(Imm) + .239(Au) + .299(Al)
(47.9 \pm 1.3)
+.163(MA) - .217(Wd) - .010(Rep) - .018(Den) + 20.15

TABLE 35
Dissimulation Index Scores

Invalidation Weights		
1	2	3
CDT score < 2 S.D. below sample mean	Asocial Index: 47.9 ± 1.3	Two Discriminant score means within Random Discriminant Space
DIT <u>M</u> Score > 4		
DIT Consistency Check > 8		
Preliminary Visual Scan: Random Jesness response pattern		

resulted in rejection data. A positive regression score, in combination with any of the other measures, also resulted in removal of subject data. The reliability checks were observed to display high consistency in identifying dissimulated questionnaires. Perfect agreement was observed across all Dissimulation Index measures in two out of three cases where data was eventually removed and discarded.

Of the original Delinquent sample size of 158, 74 subjects were lost (46%). Of these, 15% were removed who were unclassifiable according to I-level; 27% were removed due to incompleting questionnaires and 57% were removed due to their strong conformance to empirically-derived random data information sets.

Of the original Non-Delinquent sample size of 156, 16 subjects were lost (10%). All of the 16 were unclassifiable according to I-level. Two of these 16 had also produced questionnaires of dubious validity and were also rejected on these grounds.

A detailed examination of the data pertaining to the rejected Delinquent subjects revealed that 60% of the dissemblers were male. Viewing by biennial age group (Table 36), it was seen that the younger delinquent subjects had more often left their questionnaires incomplete or incorrectly filled-out; this became readily apparent upon cursory visual examination. The eldest group (15-16) were only identified as dissemblers through statistical procedures. Seventy-one percent of subjects in this latter age group were delinquent females.

An assumption had been made a priori, that the cooperation of test subjects, especially among the delinquent group, could best be accomplished through the participation of staff personnel serving as research assistants. Owing to their prior knowledge of individual idiosyncrasies of their charges, staff members were considered best able to successfully

TABLE 36

Percentage of Invalid Data Sets for Delinquents,
by Age (n=63)¹

Age	Percentage
9-10	50
11-12	34.7
13-14	50
15-16	53.8

¹11 Delinquents sample subjects were unclassifiable according to I-level. They have not been included in this table.

gain examinees' consent and cooperation in completing the questionnaire. It appeared that, for the elder subjects, considerably more preparatory groundwork would be necessary in order to acquire more useful test information for these persons.

A factor analysis of the Random Jesness data was performed to assess whether any emerging factors would be comparable to any of the previously identified factors for the adolescent groups. Table 37 details the factor loadings for this analysis.

Four factors accounted for approximately 70% of the total variance. The correlations and loadings obtained in Table 37 are discrepant with all of the previously published information by Jesness. None of the factors which have emerged bear any relation to factor structures reported earlier in this or in previous factorial research (cf. Woodbury & Shurling, 1975).

Summary of research findings

This study set as its main purpose, to identify the extent to which the various stage measures: interpersonal maturity, logical, moral and social development were related, both conceptually and empirically.

Hypothesis Set 3 examined the relation of Interpersonal Maturity Level to cognitive, moral and role-taking measures. Hypothesis Set 2 was prepared to investigate the interrelations among cognitive and socio-cognitive variables, while Hypothesis Set 1 was drafted to assess the relation of Delinquents to Non-Delinquents across the principal developmental measures.

Both of Hypotheses Sets 1 and 2 were included to establish the validity of the test measures included in this study through comparing inter- and intra- group relationships on selected developmental variables to previously reported research findings. The results of the study,

TABLE 37
Factor Analysis of 100 Random Jesness
Psychological Inventories¹

	Factor Loadings ²				h ²
	I	II	III	IV	
Social Maladjustment	297	-833	297	187	916
Value Orientation	744	112	180	328	709
Immaturity	665	386	455	027	801
Autism	738	-312	-153	079	756
Alienation	103	-141	921	110	907
Manifest Aggression	015	031	083	943	924
Withdrawal	126	887	069	210	853
Social Anxiety	844	-178	004	-328	885
Repression	-035	-023	126	-175	935
Denial	-145	490	459	-378	789
% Total Variance	23%	20%	14%	13%	

¹Principal Axis Solution, Varimax rotation with iterations.

²Decimal points omitted.

reported in Chapter 4, illustrate that the positive interrelation of logical to moral and social development has been reaffirmed. Moreover, the Delinquent group was shown to differ from the Non-Delinquent group on the test measures in a direction which is congruent with previous research, and the difference has also been shown, in this study, to be statistically significant.

Lastly, and most importantly, Delinquents when differentiated according to Interpersonal Maturity Level, have been reported to vary in the extent to which each group displays Formal Operational thought, principled moral reasoning and reciprocal role-taking abilities.

The measures utilized in this study were shown to discriminate well between the three Delinquent I-level groups. However, the Non-Delinquent groups, when divided by I-level, were not seen to differ significantly in any of the principal developmental measures. Only on two Jesness Inventory personality measures (Immaturity and Repression) was the separation in scores between the groups greater than chance. In evaluating this empirical information globally, it must be assumed that the two Non-Delinquent groups are sufficiently homogeneous in logical and socio-cognitive functioning, despite their varying Interpersonal Maturity levels, to the extent that the developmental measures in this study have been unsuccessful in establishing meaningful discriminations or appreciable differences among them. This has not been true for the Delinquents however. Despite the statistical operation of experimentally removing the effect of age for Delinquents, there must remain the possibility that certain of the significant findings which have been reported may be related to the fact that the lowest Delinquent I-level group ranged from 1½ to 2 years below the other two groups (who did not differ from one another in mean age).

An important feature of this study has been the inclusion of empirical-statistical programs identifying dissimulated and otherwise faked test information sets. These programs have shown the Delinquent group to be highly characterized by non-conformance and less than optimal test acquiescence, while the Non-Delinquent control group was seen, almost without exception, to have produced valid and useful testing information. This observation continues to highlight the difficulty in conducting research with offending, delinquent adolescents.

CHAPTER V

Discussion

Integration of research findings

An important premise antedating this study has been the belief that delinquent offenders are not all alike. There is a general consensus among delinquency theoreticians and researchers upon this point. Offenders seemingly differ from one another in the form of their offenses, in the reasons for their conduct, and in the meaning of their crimes.

There appears to be considerably less agreement as to the specific manner in which offenders differ and in the aetiology of their anti-social acts, as was evident in the review of delinquency literature reported in Chapter II.

One group of theorists adopts an organic/neurological approach to delinquent understanding where an investigation into the status and integrity of the individual offender as a physiological system is undertaken. Offenders' deviancies appear to be related to some form of physiological or morphological anomaly. Body-types, endocrine or neurological dysfunctions and chromosomal or other genetic irregularities are held to account for youthful criminality. Clearly, this vantage on delinquency is a pathological one.

A second group of theorists presents a philosophy which regards delinquent conduct as a product of social interaction and culture. Crime and delinquency are viewed as social phenomena and factors within the offender's environment (values, cultural definitions, social class and ethnicity variables) are examined in the explication of antisocial conduct.

A third group of theorists examines what may be termed "purely intrapsychic" variables. This group of theorists proposes that delinquent conduct is the overt representation of flaws or defects in one's phenomenologic perception of self which then leads to conduct ascriptive of a "self-fulfilling prophecy", or of irregularities (usually delays) in the psychological growth and development of an individual.

This study has adopted the latter perspective in delinquent understanding--that being a developmental and psychological one. A classification system which corresponds to this orientation has been investigated. The Interpersonal Maturity Level Classification System has been identified as a typology which offers assistance to practitioners in the establishment of treatment programs for delinquent offenders.

Interpersonal Maturity Level Theory is characterized as perceptually-based, socio-cognitive and developmental. Jesness (1974) for example, has noted a variety of dimensions which are important to Interpersonal Maturity including: (a) the ability to conceptualize, (b) social awareness, (c) information processing ability, and (d) abstraction and manipulation of social symbols.

Construct validity studies which have been conducted into I-level classification with delinquent offenders have been generally supportive in confirming, empirically, relationships predicted by theory. For example, I-level classification has been shown (detailed in Chapter II) to be positively related to the constructs of affect awareness, cognitive-complexity, intelligence, impulse-control, foresight/planning ability and internalized guilt. Jesness, moreover, has reported findings of other related studies which show significant relationships to ego-development, locus of control, psychological (perceptual) differentiation, neuroticism and psychoticism.

Developmental research in delinquency. Research studies show that delinquent populations when matched with non-delinquent controls, are considerably lower in "cognitive development". However, level of "cognitive-development" has often been extrapolated from intelligence test scores. This assessment procedure, as a gauge of logical growth, has not been wholly accepted. Very recently, studies have been conducted which have avoided I.Q. measures opting instead for assessment tasks which more directly investigate cognitive-operational thinking in the context of Piaget's developmental model. Of these, Jurkovic & Prentice (1977) for example, have discovered groups within a delinquent population to be differentiable in extent of formal operational thinking.

Literature investigating the moral judgement development of deviant populations such as delinquent adolescents is rapidly increasing. It has been reported, with some consistency, that such groups are morally well below their age-matched non-delinquent counterparts. Their poor comprehension of higher moral thinking has been advanced as an important reason for their antisocial conduct.

When role-taking ability is examined, whether in moral or in non-moral situations, delinquents are more often found lacking the perceptual ability to appreciate the perspective of another person removed from themselves. Rarely do they exhibit any truly empathic or reciprocal understanding of another's thoughts or feelings.

Owing to the manifestly developmental context of I-level theory and classification, this study sought to investigate the relationship of I-level to analogous developmental constructs in logical and socio-cognitive domains. Findings presented in Chapter IV revealed that a group of institutionalized delinquent offenders (n=84) scored significantly lower

in Interpersonal Maturity Level than a large group ($n=140$) of age-matched non-delinquent students (Table 8). The distribution of I-level designations for persons in each group (Tables 9 and 10) suggested that non-delinquents were characterized by a mode of interpersonal functioning where social interest appeared as a strong, motivating influence upon them. That is, the approval and acceptance of other persons, especially of adults, was considered to be a central interpersonal directive of these non-delinquent persons.

The delinquent group appeared to be much more heterogeneous in their interpersonal perceptions and interactions. A considerable number (30 percent) exhibited a marked lack of social maturity--that is, they appeared to invest considerable energy in inefficient drive-reducing activities and in relating to others, particularly adults, as instruments of need fulfillment. In some respects they appeared overwhelmed by the complexities in social interactions and unable to comprehend their own social stimulus value.

A second group of delinquents (41 percent) appeared to have adaptive social skills. Some awareness of their social stimulus value was implied in the recognition of the importance of rules, regulations in promoting smooth interpersonal relations. These persons appeared to have a prominent manipulative component in their personalities.

A third group (29 percent) appeared very much alike their non-delinquent counterparts in extent of social interest and importance of social approval and recognition from high-status adults.

When the Non-Delinquent total sample was divided by I-level classification and their functioning in logical, moral and social domains was examined, results (Table 15) indicated that they did not differ signifi-

cantly in any of the measures utilized in the study. It appeared that the non-delinquent group, regardless of I-level classification, was markedly homogeneous in all of the major developmental measures. It was also seen that the Non-Delinquent group, as a whole, scored significantly higher than all of the delinquents in logical, moral, social and interpersonal levels of functioning.

Developmental analyses of delinquent I-level types. When reviewing the developmental functioning of delinquent persons, it was noted that offenders at the lowest Interpersonal Maturity level, the I-2's, were younger than offenders at either of the other two Interpersonal levels by $1\frac{1}{2}$ to 2 years (Table 18).

The I-2 offenders displayed minimal formal operational thinking and it was therefore anticipated that they would lack the cognitive prerequisites to advance to a pro-social Conventional moral stage. Accordingly, it was concluded that such persons would perceive interpersonal situations and would make decisions about problems of choice solely in terms of what is good for them. Insofar as they appeared unable to logically comprehend the feelings, reactions or viewpoint of another, they lacked any real empathic ability. It was further concluded that similar persons would not profitably spend time in therapy programs which focussed upon gaining insight into one's actions or highlights the need for "putting oneself into another's shoes". Of interest is the observation (Jesness, 1975b) that the I-2 offender responds most readily to a Behavioural Modification intervention program. Adaptive response to this type of treatment appears congruent with a perceptual frame of reference which requires the explicit delineation of controls and limits which permits an ordering of their world into a consistent, stable and predictable system.

Offenders identified at the mid I-level classification (I-3's) were found to be early adolescents in this study. When compared with lower (I-2) and upper (I-4) I-level groups, they appeared more like the lower, than higher, group. That is, they continued to display a developmental delay in formal operational thinking in relation to their non-delinquent age-mates. Further, they were reported to be lower in empathic and reciprocal role-taking ability and to more often function within Preconventional moral stages. Their non-delinquent counterparts were more often early Conventional moral reasoners. The I-3 persons appeared to be predominantly egocentric and hedonistic, presumably interpreting their world as existing to serve them. I-3 persons, however, did demonstrate a greater capacity than I-2 persons in their capacity to predict how other people might react (but not feel) and they may possibly utilize this knowledge to their advantage in manipulating their way around obstacles. Personologically, they did not view themselves as dysfunctional and they more often externalized their problems, placing blame upon others for any unhappiness or conflict taking place within their environments.

Delinquent persons who were identified at the highest of the three Interpersonal Maturity levels, the I-4's, were seen to be very similar in their perceptual and reasoning frames as their non-delinquent counterparts. The scores obtained for I-4 delinquents (n=24) and Non-Delinquents (n=140) on the logical, moral and role-taking measures utilized in this study corresponded very closely (Tables 8 and 16). The I-4 persons displayed a level of formal operational thought which suggested that they were well on the way to a differentiated logical thinking mode which permitted a genuinely empathic and mutual understanding of how others not only react--but feel--and they appeared capable of reflecting, in a

mature way, upon how others viewed their own actions. Evidently, for persons at the highest delinquent I-level, social anxiety predominated and they appeared to consciously seek the approval of high-status others--usually adults--with a greater willingness to modify their behaviour in order to gain that approval.

Correlational analyses reported in Tables 14, 29 and 30, illustrated a strong interrelationship among the principal developmental variables of logical, social and moral growth. While age was constituent in this intercorrelational matrix, advance in age did not, in itself, fully account for the strength of the relationships among the developmental variables.

Entering I-level classification into the correlational matrix (Tables 29 and 30) revealed positive relationships with each of the principal developmental variables all of which, once again, correlated, with chronological age. I-level developmental correlations were not interpreted as a simple function of advancing age however. Rather, the results of the statistical analyses were taken as evidence of a general developmental factor. That is, each of the test measures was interpreted as tapping one constituent element of human psychological development. All were grouped under the rubric of structural-developmentalism. A related statistical procedure, the factor analysis reported in Table 31, illustrated clearly that positive factor loadings were evident of all measures proposed as elements of development while those variables which were not predicted as developmental components did not load significantly upon a 'general developmental' factor.

Implications of research findings. There are several important implications which lead from the results of this study. The first is that

I-level classification may be placed more broadly within a developmental context rather than being defined strictly as a social-perceptual diagnostic system.

Next, it appears that institutionalized delinquents are developmentally differentiable. Not only are they shown to be developmentally delayed in relation to non-delinquents, but, when we analyse their unique reasoning and judgemental abilities we can make discriminations within a delinquent population in extent of advance in logical and socio-cognitive functioning. Moreover, delinquents may be placed within a hierarchical grid where it may be shown that some offenders function at very low levels logically, socially, and interpersonally, while others are considerably more advanced, developmentally in relation to their delinquent peers, and are possibly equal to their non-delinquent counterparts.

This study suggests that there is an orderly, and progressive hierarchical sequence in psychological development which conforms to Piaget's principle of decentration. Persons appear to move from relatively egocentric, impulsive, non-analytic and socially naïve levels of cognitive and affective development to higher levels which are characterized by increasing affective and empathic understanding of others, greater cognitive complexity, and a more differentiated information-processing ability which permits the objective evaluation of one's world and of one's role within that world.

Most importantly, a developmental understanding of delinquency leads to the elaboration of strategies which will promote advance in cognitive and socio-cognitive domains. There is a growing body of evidence which indicates that decentration is a practicable goal in delinquency management and the I-level classification methodology offers the personological

framework within which we may differentiate offenders developmentally.

Therapy experience for delinquents based upon reasoning development

An implicit assumption of central importance in a developmental understanding of delinquency is of the centrality of distorted or delayed thought, perception and reason in accounting for behaviour dysfunction. It is maintained that, with the possible exception of the psychotic, all conduct is purposive and directly related to and a consequence of ideas, impressions and perceptions of one's world.

Alfred Adler (1964), a reformed Freudian psychotherapist, stated:

I am convinced that a person's behaviour springs from his ideas....The individual...does not relate himself to the outside world in a predetermined manner, as is often assumed. He relates himself always according to his own interpretation of himself and of his presenting problem....It is his attitude toward life which determines his relationship to the outside world.

Ellis (1973) traced the role of thought in determining feelings, responses, and reactions to the ancient Stoic philosophers Zeno, Chrysippus, Panaetius, Cicero, Seneca, Epictetus and Marcus Aurelius.

Epictetus wrote, in The Enchiridion in the first century A.D.:

Men are disturbed not by things, but by the view which they take of them.

Ellis (1973) stated that man tends to perceive, think, emote, and behave simultaneously and interactionally and is, at one and the same time, cognitive, conative and motoric. He rarely perceives or acts without also cognizing, since his present sensations or actions are apprehended in a network of prior experiences, biases, memories and conclusions. He rarely emotes without thinking since his feelings include, and are triggered by an appraisal of what a given situation means and of its importance for him. He rarely moves or acts without perceiving, thinking and emoting since these processes provide him with reasons for acting:

Just as his "normal behaviour" is a function of his perceiving, thinking, emoting and acting, so is his dysfunctional or disturbed behaviour similarly formed. To understand man's self-defeating conduct, therefore, it is desirable that we understand how a person perceives, thinks, emotes, and acts; and to help him change or eliminate that malfunctioning, it is usually desirable that we use a variety of perceptual-cognitive, emotive-evocative, and behaviouristic-reeducative methods in our full therapeutic armamentarium. (Ellis, 1973, p. 171)

The cognitive-developmental understanding of delinquency is at broad variance with the more traditional Freudian perspective which typically tends to view disturbed children and adolescents as emotionally deprived, having suffered through the lack of a constant relationship of interpersonal warmth, trust and sharing.

At least one psychoanalyst (Bettelheim) has espoused children's removal from the damaging influences of parents and placement with clinical personnel who are capable of establishing, fostering and promoting warm interpersonal relationships.

While the affective needs of older children and adolescents must not be disregarded, psychotherapeutic practice circumambulates around only this dimension as an idée fixe yet it has not been proven to be outstandingly successful.

Kohlberg maintains that psychiatric and psychotherapeutic approaches have failed most offenders as follow-up evaluations of psychotherapy programmes have usually shown no difference between inmates who received psychotherapy and those who did not. Kohlberg believes that one reason the psychiatric solution has failed for most inmates is that it ignores in its treatment strategy the most important influences on inmates' lives--their relationships with correctional officers and other inmates.

He summarizes his views on modern psychotherapy programmes in the following points:

1. While a large number of inmates are immature in moral

reasoning and decision-making and in the control of impulses, only a small proportion of inmates can be said to be mentally ill or emotionally disturbed. Diagnostic terms like 'sociopath', intended to convey the notion of mental illness, often refer to nothing more than the tendency to break the law.

2. It follows from the first reason that a psychiatric focus upon illness or personal 'hang-ups' ignores the basic problem of the inmate's control and responsibility. Psychotherapy programmes, in themselves, do not promote social change. Insight into one's own problems does not, in itself, change the inmate's view of the social world and of right and wrong in such a way as to create a positive and responsible pattern of life. Before insight into problems can help most individuals to moral action, they must have reached a new stage in which they believe their past behaviour is inadequate and that they must set new standards for themselves.
3. They focus upon personal hang-ups and only indirectly on the inmate's everyday social and moral interaction with other inmates and staff. They cannot integrate the conflicting staff roles of custody and treatment.
4. Psychotherapy programmes run the risk of treating the inmate as weak, sick or incapable of taking responsibility. To treat an inmate as sick or as needing help from an authority or therapist is to decrease a sense of responsibility to self and others. (Kohlberg et al, 1975, pp. 249-50)

Moral development in institutional care

Criminal offenders are known to be considerably lower in moral judgement development than are non-offenders of the same social background. Studies report that the majority (75 percent) of non-criminal adolescents and young adults are at Conventional moral Stages 3 and 4, while the majority of adolescent offenders are at Preconventional moral Stages 1 or 2.

Kohlberg explains that adolescent offenders remain at Preconventional stages of moral judgement because, unlike physical growth, moral growth is deemed to be dependent upon the existence of positive-growth-producing experiences with others--and persons functioning at lower stages have typically failed to encounter some or all of the following growth-producing experiences:

1. Living in a situation where seeing things from other people's points of view occurs and is encouraged. This is the important experience of 'role-taking opportunities'.
2. Living in an environment where logical thinking is encouraged. One cannot be at a high stage of moral reasoning and be at a low stage of logical reasoning (though one can be at a high logical stage and a low moral stage).
3. Living in an environment which gives the individual responsibility to make moral decisions and to influence his moral world. This is an experience typically missing in the offender's childhood world.
4. Exposure to conflict in reasoning (as opposed to sheer emotional conflict) about moral decisions. Being exposed to moral decisions and discussions and becoming aware of moral viewpoints different than one's own challenges the individual's current thinking and leads to rethinking at the next stage up. Obviously, moral controversy stimulates development only in an emotionally secure environment in which others present their viewpoints through reason rather than through threat. Typically low-stage offenders or others have lacked such exposure to conflicting ideas.
5. Exposure to individuals at a stage higher than one's own. Preconventional adolescent offenders are much more likely to have Preconventional parents than are Conventional offenders or controls.
6. Exposure to a just environment. Inmates often come from environments which not only lack higher-stage stimulation, but which are definitely unjust: unjust poverty, unjust behaviour by parents, unjust behaviour by peers. There is no stimulus to moral thought or action in a low-stage or unjust world. (Kohlberg et al, 1975, p. 251)

The just community approach to correction. Many of the problems which face child care and correctional workers are considered, in Kohlberg's opinion, to be problems of moral decisions. The decision-making process can go on at various levels or moral stages but persons at differing moral stages commonly have divergent views as to what constitutes "right moral action" in various situations. One result is that considerable and unabating hostility may be generated through a misunderstanding and misappreciation of this developmental principle.

In applying the 'just community' approach in treatment and rehabilitation centres, Kohlberg has considered it useful to resolve staff/student conflicts through moral discussion within a small group of inmates and staff members. Group members help both staff and students alike to understand each other's thinking by presenting that thinking in their own terms. Initial disputes then become issues for discussion and clarification of what is the fairest solution to the problem rather than remaining as a source of hostility. By coming to see each other's points of view the misunderstanding can then be more acceptably tolerated, if not fully resolved.

In addition to addressing issues of conflict, this kind of discussion can be an important form of rehabilitation or treatment since it may help inmates to engage in new ways of moral thinking and to move to the next stage of moral reasoning. Moreover, it may sensitize staff members to interact with their charges in a morally more mature and higher level to facilitate this progression. The understanding of moral stages accomplishes two important things for staff:

1. It allows the staff to understand inmates on their own terms and to understand their ways of thinking. It thus enables communication, since persons at lower stages can only understand, at most, one stage higher. A staff member who reasons and acts in a high-stage way is often misunderstood by a lower-stage inmate with consequent angry feelings and potential conflicts.
2. It helps staff to lead moral development groups because, by recognizing higher-stage arguments when they are presented by other inmates, staff members can ensure that these arguments are heard by other inmates who are reasoning at lower stages. Staff members thus can be free to play the role of arbitrators and facilitators of discussion and need not advocate particular views themselves. (Kohlberg et al, 1975, p. 251)

Kohlberg's involvements, and those of his associates, with the treatment of offenders has led him to posit that moral growth cannot be taught, whether directly or indirectly. Rather, moral judgement develop-

ment programs provide inmates with "the elements of experience they have missed and which have led to moral stagnation". A key to a growth-producing milieu is the establishment of an environment which is based upon democratic principles, hence is 'just'. His criteria for fostering and promoting moral progression to higher stages and levels are now well known:

1. Role-Taking Opportunities. The programme attempts to provide role-taking opportunities through discussion of moral and personal issues in which each individual is encouraged to present his or her point of view to others and to understand other points of view.
2. Intellectual stimulation. An effort is made to encourage logical analyses of situations through optional discussion classes in psychology, sociology and the like.
3. Responsibility. Actual responsibility for decision-making is given to the inmate.
4. Cognitive-Moral Conflict. Discussion of moral and personal dilemmas in small groups, and of community policies in the community meetings, exposes individuals to other viewpoints and leads them to question and rethink their own positions.
5. Exposure to the Next Stage Up. Inmates typically range from moral Stage 1 to moral Stage 4, with most at moral Stage 2, next moral Stage 3. Inmates at any given stage (except Stage 4) are presented with arguments at the next stage up by other inmates. Group leaders clarify and support inmates' higher-stage reasoning and present higher-stage reasoning of their own.
6. Living in a World or Community Perceived as Fair and Concerned. This element of the programme, perhaps the most important, is the objective of the small discussion groups, the meetings of the entire community, and the daily interactions of officers and inmates. (Kohlberg, et al, 1975, pp. 257-258)

Structural-developmental clinical analysis

Owing to the belief that Piagetian theory applies only to cognitive development, its potential application to clinical and social education areas has not been fully appreciated.

While the notion that human development proceeds according to a predictable series of universal stages is generally accepted, few profes-

sionals directly involved with the social adjustment of children view cognitive-moral stages as applicable to their psychological handling of children's social and emotional behaviour.

Child clinicians have not usually conceptualized children's social-emotional deficits in terms of retarded moral thinking nor have they defined role-taking, cognitive or moral gains as suitable aims of therapeutic intervention.

One common criticism of the cognitive-developmental stage approach is that it seemingly disregards nonjudgemental or irrational factors such as fantasy, interpersonal dynamics and unconscious drives in the explanation of interpersonal behaviour. Yet, upon closer examination it appears that the cognitive-developmentalists, in understanding the child's behaviour, tries to see things through the eyes of the child. Determining the stage of cognitive or social development of a particular child leads the professional to understand how the child looks at the world and to avoid expectations of conceptual and emotional abilities that the child has not yet developed and cautions him not to overestimate the affective as well as cognitive capacity of the child. Rather than discounting the child's interpersonal dynamics, this cognitive-developmental approach, in fact, enhances that understanding by exploring the stage underlying the behaviour and by identifying the next stage toward which his development can be directed (Selman, 1976).

In the cognitive-developmental clinical-analytic procedure, analysis focuses upon content of thought and perception:

What is the child's concept of the subjective aspects of self and other? What is his understanding of another's capabilities, personality attributes, expectations and

desires, feelings and emotions, motives, potential reactions and social judgements?

Selman has summarized the value of the clinical application of developmental principles in the following way:

A stage analysis across developmental concepts yields a specific clinical profile that shows the areas in which the child is lagging and those in which he is functioning at an age-typical stage. Even more important, such analysis can indicate areas of difficulty in the child's social and emotional functioning and these findings will complement the information gained from other clinical tools. (1976, p. 312)

From the cognitive-developmental perspective, both education and psychotherapy seek the optimal rate of development of children through social-cognitive and cognitive stages. This developmental stage perspective becomes an invaluable tool, a common concept that can coordinate the different outlooks and terminologies of the clinician, educator and developmentalist. (1976, p. 308)

Implications for further research

There are three areas which may be considered to be worthy of further study and investigation. First, a promising start is noted in the organization of the Formal Operational test battery (Appendix B) which was prepared for this research. Further refinement of measures of propositional operations involving proportionality schemes is indicated. More specifically, a cross-validation with more common Piagetian physics tasks would prove to be of value; and the relation of this type of assessment to the Formal Operational substages: beginning formal, early basic formal and consolidated basic formal, would be of interest.

Another area of further research effort involves the refinement of a brief, yet effective, test battery. In this study, while it was seen that, in the vast majority of cases, the questionnaire proved to be self-administering, it was not without its problems. Younger subjects--especially among the delinquents--proved to have some difficulty with the

format and evidenced problems in comprehending test requirements and expectations. Considerable value is seen in improving an assessment battery of this type which could be of service as an initial screening instrument for diagnostic and intake personnel in treatment and youth care facilities. This development may result in the preparation of more than one standard assessment form--geared to varying age groups: younger respondents more often found this study's test battery too lengthy; older adolescents became bored too easily. Additional improvements of the self-administering assessment procedure would involve identifying the specific problems, complaints or disagreements of test respondents which may have led to nonconformance. The identification and elaboration of instructions, pre-administration information and facilitating testing conditions which may best provide acceptable test conformance needs to be conducted. While the Dissimulation Index has proven to be valuable in identifying those examinees who may, despite other observations, seek to invalidate their questionnaires, it is of no value in charting specific treatment interventions or directions that might be pursued with individual offenders.

Finally, and most importantly, this study is seen as a first and preliminary step in moving toward a more sophisticated treatment intervention and strategy with offending children and adolescents. What has been reported here is modest at best: offenders are different from one another. Such an observation is hardly new. What is novel is that delinquent offenders may be shown to be developmentally differentiable, and this is important as it is known that fostering and promoting developmental growth and maturation is a realistic and worthwhile pursuit (Appendix D). What remains to be done, and which constitutes the ultimate

purpose of this research direction is to clarify and empirically test those treatment interventions which will work for varying types of offenders in treatment care institutions. This would necessarily require long-term and continuing efforts of many interdisciplinary professionals.

Conclusion

The structural-developmental approach as it is applied in clinical practice does not predict specific actions, rather it describes the general form of thinking most likely to underlie a wide range of an individual's judgements which are then seen through his conduct. While some individuals may prefer or choose not to critically examine their conduct, clearly others lack the ability to do so. Clinical interventions with preadolescents and adolescents which are developmentally oriented, focus upon helping children to understand the social reasoning of others and to relate other's social points of view to their own.

While adults and children may say one thing and do another this does not mean that they do have a reason for what they do, or that there is not a structure underlying their reasons. While the relation of structure to conduct is not isomorphic, the cognitive-developmental approach makes it clear that an analysis of reasoning is one necessary condition for the complete understanding of social behaviour.

To summarize, cognitive-developmental and social-cognitive analyses do not "explain" the causes of behaviour. They do, however, present a way of organizing and "describing" behaviour, and this description then becomes useful for clinical interventions when we examine reasoning and judgements within the context of discrete, successive and invariant stages of reasoning development.

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APPENDIX A
ABSTRACTS OF SELECTED
INTERPERSONAL MATURITY LEVEL
THEORY DISSERTATIONS

AFFECT AWARENESS, INTELLIGENCE AND THE INTER-
PERSONAL MATURITY LEVEL CLASSIFICATION

Susan Ruth Ferris ZAIDEL, Ph.D.
University of California, Los Angeles, 1970
Chairman: Professor Charles Y. Nakamura

The study investigated certain aspects of the Interpersonal Maturity Level Classification (I-level), which is the basis for a differential treatment approach to delinquents. It was hypothesized that I-level groups differed in intelligence and affect awareness. The study also examined more general issues concerning the interrelationships among cognitive, perceptual and judgmental measures of affect awareness, and the role of intelligence in each.

The measures of intelligence were Raven's Advanced Progressive Matrices, the SRA Verbal and Nonverbal Forms, and the Revised Beta Examination.

The cognitive measure of affect awareness (Task A) required Ss to write, within five minutes, as many words as they could think of which could be used to describe people. It was scored for total number of words, number of affect words, and number of internal and external constructs.

The perceptual measure of affect awareness (Task B) consisted of twenty-five pictures of people who differed in affect state and a number of external characteristics. In the neutral condition of administration, Ss were simply asked to write good descriptions of the main person in each picture. In the affect attention condition Ss were asked to include the person's feelings or mood in their descriptions. The affect attention score consisted of the number of descriptions which included affect.

The judgmental measure (Task C) was a 67-item film of facial expressions of affect which Ss were asked to identify.

The study was conducted in two sessions on 110 delinquent girls. Subjects were administered the Progressive Matrices and Task A in one session, and Tasks B and C in the second session.

The major findings follow:

1. There was a moderately high positive relationship between I-level classification and intelligence.
2. There was a significant relationship between I-level classification and race, which was partly due to racial differences in intelligence.
3. I-level was positively related to size of vocabulary for describing other people (particularly number of internal constructs), to strength of a natural set to attend to affect cues, and to ability to judge affect from facial expressions.
4. Although I-level groups differed in their natural responsiveness to affect cues, there were no differences between groups when Ss were instructed to include affect in their descriptions.
5. Intelligence accounted for a considerable portion of I-level differences in the three measures of affect awareness.
6. Intelligence, verbal fluency, and race were the most important components of I-level; the best prediction of I-level was attained by a weighted sum of intelligence, race, and number of words used to describe other people.
7. There was no relationship between the tendency to use affect labels in a cognitive task of describing other people and the tendency to attend to perceptual cues of affect.
8. There was no relationship between use of affect labels in describing others and the ability to identify affect in facial expressions; there was a small positive relationship between the affect identification ability and the broader tendency to use internal constructs in describing others, but it was apparently due to the effects of intelligence on both tasks.
9. There was a small positive relationship between an affect attention set and ability to decode facial communications of affect. Both high affect attention and at least normal intelligence were necessary for a high degree of accuracy in decoding the facial expressions.

A CONSTRUCT VALIDITY STUDY OF THE INTERPERSONAL
MATURITY LEVEL CLASSIFICATION SYSTEM FOR YOUTH OFFENDERS

Darlene Rae MILLER, Ph.D.
University of Massachusetts, 1972

Director: Norman F. Watt, Ph.D.

A study was performed to investigate the construct validity of the Interpersonal Maturity Level (I-level) Classification System, presently used widely with juvenile offenders. The theory was validated for the constructs of cognitive complexity, impulse control, and foresight or ability to plan behavior, but not for the constructs of locus of control and internalized guilt. Of the variables studied, cognitive complexity, as measured by Hunt's Paragraph Completion method, was shown to be the best single predictor of I-level classification. A highly significant positive relationship was found between I-level and verbal and non-verbal intelligence ($r = .58$ and $r = .53$ respectively). However, when the effects due to intelligence across groups were controlled, the relationships found significant in the principal tests of the hypotheses continued to be significant. Results were discussed in terms of the measures used, the theoretical implications for I-level as an example of a theory based on the cognitive-developmental approach to socialization, and some practical implications for the use of alternate measures of I-level classification. Suggested directions for further research were specified.

Dissertation Abstracts International
1973 (Vol.33) (12-B) 6088

STUDY OF SOME BASIC ASSUMPTIONS OF "I" LEVEL

CLASSIFICATION SYSTEM OF DELINQUENCY

Kenneth LERNER, Ph.D.
Purdue University, 1973

Major Professor: Dr. Mark Stephens

The purpose of the present study was to examine some of the basic assumptions of the "I" Level Classification system of delinquency. Seventy-two institutionalized delinquent girls, twenty-four from each of the three major "I" subtypes (Na, Nx, and Cfm), were tested on a series of variables related to "I" Level theory predictions of subtype differences. The specific variables studied were cognitive complexity, impulsivity-reflectivity, present-future time perspective and cheating behaviour. Both impulsivity-reflectivity and cheating behavior were studied following either a success or a failure experience. It was predicted that failure would produce more cheating and impulsivity than success. Results revealed significant differences, following predictions, between "I" subtypes on the impulsivity-reflectivity and cognitive complexity measures. No significant differences were found with respect to cheating or present-future time perspective. Failure did not lead to increased cheating, but it did lead to greater impulsivity, as predicted, particularly for the Cfm subtype.

Dissertation Abstracts International
1973 (Vol.34) (6-B) 2939

INTERPERSONAL MATURITY THEORY: A FACTORANALYTIC STUDY

GUTIERREZ, Manuel Jaime, Ph.D.
Temple University, 1975

The purpose of this study was to attempt to establish the validity of the Interpersonal Maturity Theory as a delinquent typology by the use of factor analytic techniques. Subjects were 285 male delinquent youths, ranging in ages from 12 to 18, who were serving sentences in a state institution. The instrument used was a behavior checklist that translated theoretical I-levels and subtypes into more precise descriptions of behavior. Ratings for the checklist were filled out on each of these youths by their cottage counselors. The behavior checklist was factor analyzed and 3- and 8-factor solutions were obtained, corresponding to the number of I-levels and subtypes represented on the checklist. A possible methodological artifact relating to the validity of the scale was examined.

Results indicated that there was reproducibility for only one of the three I-levels. The eight subtypes had little reproducibility; only one of them was clearly defined as a homogeneous entity. Thus, these findings did not support the distinctions claimed by the theory in regard to general I-level and specific subtype. Previous findings which failed to demonstrate I-level distinctions or reported mixed results as to the construct validity of the theory were examined in the light of the poor reproducibility obtained in this study.

The Interpersonal Maturity Theory, as represented in the behavior checklist, appeared to be composed of seven empirical, oblique dimensions. These dimensions were interpreted in terms of the items which had the highest factor loading on them. They were further analyzed with collateral

data, and these relationships were also interpreted. In general, these factors were found to be very reliable measures.

These factors appear to account for five distinct aspects of delinquent behavior: Psychopathy (combination of the highly correlated Power Orientation and Immature Acting-Out factors), Neuroticism, Passive Conformity, Subcultural Delinquency, and Situational Reaction. There is a sixth, bipolar, category which seems to judge the delinquent's Openness to help firm others.

The present findings did not show correspondence to the theoretical distinctions provided by I-level theory. Continued efforts to clarify and simplify I-level theory are needed. The integration of theoretical constructs with empirical methods are strongly recommended for refining typological distinctions among delinquents. These should, in turn, result in improved methods for the prevention and treatment of delinquency.

Dissertation Abstracts International
1975 (Vol.36) (6-B) 3042

APPENDIX B

COGNITIVE DEVELOPMENT (FORMAL OPERATIONS) TEST ITEMS

Verbal Seriation (Transitive Inference):

Jane is older than Helen. Helen is older than Alice.

Who is the oldest? Jane _____ Alice _____

Jenny is smarter than Lucy. Lucy is smarter than Rose.

Who is smartest? Jenny _____ Rose _____

Betty is younger than Susan. Betty is older than Judy.

Who is oldest? Betty _____ Susan _____ Judy _____

Harry is taller than John. John is taller than Bill.

Who is shortest? Harry _____ Bill _____

Vancouver is west of Calgary. Calgary is west of Winnipeg.

Which is farthest east? Vancouver _____ Calgary _____ Winnipeg _____

Which is farthest west? Vancouver _____ Calgary _____ Winnipeg _____

If Mary is my father's daughter, then Mary is:

my mother _____ my sister _____

Verbal Class Inclusion:

Which word does not belong with the other two?

DOG _____ BIRD _____ COW _____

Which word does not belong with the other two?

CAT _____ NEAR _____ SUN _____

Which word does not belong with the other two?

RUN _____ SEE _____ TOUCH _____

Which word does not belong with the other two?

THINK _____ SMELL _____ HEAR _____

Which word does not belong with the other two?

HUM _____ SPEAK _____ WHISTLE _____

Which word does not belong with the other two?

WIDE _____ ZIGZAG _____ STRAIGHT _____

Verbal Analogy:

If DOG goes with BONE, then COW goes with:

MILK _____ GRASS _____ LEATHER _____

If RABBIT goes with FOX, then DOG goes with:

WOLF _____ CAT _____ PUPPY _____

If I say SUN is BLACK and WINTER is HOT, then I would call a
 POLICEMAN: a ROBBER _____ an ANGEL _____ a DETECTIVE _____

If AB goes with cd, then RS goes with: pq _____ qr _____ tu _____

Numerical Analogy:

$$3 + \underline{\quad} = 7 + 2$$

$$8 \times 3 = 3 \times \underline{\quad}$$

$$8 \times 4 = 4 + \underline{\quad}$$

$$7 - 4 = \underline{\quad} - 7$$

$$428 + 517 = 517 + \underline{\quad}$$

Numerical Seriation:

1, 3, 5, 7, 9, _____

What number goes next 10 11 12
 in the blank space?

1, 2, 4, 8, 16 _____

What number goes next 8 24 32
 in the blank space?

1	2	3	4
2	4	6	_____

What number goes in the 4 8 12
 box?

3	4	8	9
2	3	7	_____

What number goes in the 8 9 3
 box?

APPENDIX C

JESNESS INVENTORY SCALE DESCRIPTIONS

The Jesness Inventory

Following is a brief description of the ten psychological trait scales of the Jesness Inventory (Jesness, 1972).

Social Maladjustment. Items for this scale were selected to show differences between delinquents and non-delinquents at all age levels tested. Social maladjustment is defined by the extent to which the individual shares attitudes expressed by persons who show an inability to meet, in socially approved ways, the demands of living. Items show delinquents tend to: show a negative self-concept, feel unhappy, worried and misunderstood, distrust authority, blame others for problems, be bothered by feelings of hostility, generously evaluate parents, be sensitive to criticism and accept much behaviour which is generally regarded as antisocial.

Value Orientation. Items selected for this scale were those which differentiated various social class groups based on ratings for the father's occupation. This scale measures a tendency to share attitudes and opinions characteristic of people in lower socioeconomic classes. The themes measured by the items include trouble, luck and thrills, fear of failure, gang orientation, toughness, and a tendency to view internal tension in terms of specific symptoms.

Immaturity. Items selected discriminated between age groups in a non-delinquent sample. This scale measures the tendency to display attitudes and perceptions of self and others which are usual for persons of a younger age. Items suggest that more immature subjects: are naïve in evaluating their own and others' motivations, tend to repress or suppress problems, lack insight, and frequently express anxiety through somatic symptoms.

Autism. Autism is defined as the tendency for the individual's thinking to be regulated unduly by personal needs. Planning and perceiving are unrealistic, and the self does not seem to be clearly differentiated from non-self or objective reality. Item content shows the high scorer to: see himself as smart, good-looking, tough, hear things, day dream, and feel something is wrong with his mind. The high scorer also prefers to be alone, is fearful and expresses many somatic complaints.

Alienation. Alienation measures the presence of distrust and estrangement in the subject's attitudes toward those representing authority. Delinquents score higher than non-delinquents at every age tested. Item content shows those high in alienation to show poor interpersonal relationships, be critical and intolerant of others, project hostile feelings onto others, and deny personal problems.

Manifest Aggression. Manifest Aggression measures an awareness of unpleasant feelings of anger and aggression and a tendency to react quickly with emotion. The high scorer is concerned about controlling his feelings, expresses disappointment with others and is frustrated in his efforts to understand and feel comfortable with himself.

Withdrawal-Depression. Withdrawal-Depression measures a tendency to isolate one's self from others and perceive a lack of satisfaction with self and others. High scorers see themselves as depressed, sad and misunderstood. They prefer to be alone, feel lonesome, feel that fighting is bad and are displeased by others' aggressiveness.

Social Anxiety. Social Anxiety measures a perceived emotional discomfort associated with interpersonal relationships. High scorers feel and acknowledge nervous tension, see themselves as sensitive to

criticism and unduly shy. Items also suggest an intro-punitive orientation for the high scorer.

Repression. Repression measures the exclusion from conscious awareness of, or a failure to label, feelings ordinarily experienced. High scorers do not admit negative feelings such as anger, dislike or rebellion and are generally uncritical of themselves or others.

Denial. Denial measures the subject's reluctance to accept or acknowledge unpleasant aspects of reality which are found in day to day living. This scale emerged as a separate cluster from repression and does not correlate highly with the repression scale. High scorers see their parents as without fault and admit no conflict with them, deny personal inadequacies or unhappiness, and are unwilling to criticize others. Low scorers indicate a willingness to admit problems, conflicts and inadequacies.

APPENDIX D

SELECTED EXERCISES FOR STIMULATING

CONCRETE AND FORMAL

COGNITIVE OPERATIONS

Specific Suggestions for the Concrete-Operational Level, seven to eleven years.

1. Encourage children to discover concepts and principles. Although you should refrain from telling them outright, you may formulate questions relevant to what is being studied in order to help them focus on some aspect of their learning. Remember, it is necessary for children to assimilate and accommodate on their own.
2. Involve children in operational tasks such as adding, subtracting, multiplying, dividing, ordering, seriating, reversing, etc., preferably in concrete ways where they utilize objects. Later you may introduce mathematical symbols.
3. Plan activities where students must grasp the idea of an ascending and decending classification hierarchy. Have them place the following in order: city of Denver, county of Denver, state of Colorado, United States, Western Hemisphere; or ducklings, ducks, birds, animals, organisms, etc.
4. Design many activities having children order and reverse order. Many third graders have problems in reversing order such as going from tall to short rather than from short to tall, or listing the cities they would pass through in taking a trip to a large metropolitan center and then reversing their order in coming home.
5. Involve students in using horizontal and vertical coordinates. Achieve this task by asking them to locate places on the city and state maps.
6. Present problems requiring students to isolate variables. Usually you will need to help students because they will not suggest all the possible variables.
7. In the advanced part of this stage have students construct theoretical models tied to concrete examples; for example, they may explain molecular theory through the use of concrete models of atoms rather than by symbols.
8. Include activities which require conservation of area, understanding of continuous quantity, weight, and displacement of volume.
9. Have children define and state problems.
10. Involve students in testing all possibilities toward resolving problems. Help them discover what strategies they use to solve problems
11. Particularly continue to ask students to justify their answers to logical-mathematical problems and situations encountered in conservation tasks. Help students check the validity and accuracy of their conclusions.

Specific suggestions for the Formal-Operational Level, eleven years and older.

Students who are in transition to formal operations should be encouraged to perform formal reasoning. Four Operations developed at the formal level follow, with suggestions for activities, hypothetical situations, and dialogue given for illustrative purposes.

Hypothetical-Deductive Thinking

Situation

The teacher proposes a problem and invites students to make hypotheses.

Each student selects the hypothesis she feels is best, and then discards or rejects the others on the basis of a personal strategy of deduction.

Dialogue

TEACHER: "Imagine that there is a large rock weighing 300 pounds which must be moved. How would you move it?"

STUDENT 1: "It could be moved by using a chain hoist or block and tackle."

STUDENT 2: "It could be moved by prying it up with a plank and then putting logs under it to roll it on."

STUDENT 3: "It could be pulled up a plank onto a trailer with a winch."

STUDENT 4: "Using a plank as a lever and logs to roll it on would be the cheaper way, so I think that is the best way to do it."

Propositional Thinking

Situation

The teacher proposes a problem involving several factors. All, some, or none of these factors may be involved.

Dialogue

TEACHER: "A car ran into a ditch on a deserted road one night. The weather bureau stated that there had been scattered rain during the hours preceding the accident. Also an empty beer can was found in the wrecked car. What kinds of evidence might help to determine the cause of the accident? For example, how would you obtain evidence as to whether the road were wet when the accident occurred and if this were an important factor?"

STUDENT 1: "If it rained and the car was driven on dirt roads, then mud would collect on the undersides of the fenders. Mud might even collect if it had not rained, though."

SituationDialogue

STUDENT 2: "Or it might have collected at an earlier date."

STUDENT 3: "If it had then there would be no mud under the car."

STUDENT 4: "Even if there were a little rain, there still might not be any mud."

Evaluating InformationSituation

The teacher presents a problem and suggests several ways it might be approached. She then asks questions causing the students to evaluate using value schemes.

Students establish criteria in their minds and analyze each approach in terms of their personal criteria.

Dialogue

TEACHER: "Here are several ways to investigate robberies:...Which do you think is the best means and why do you think so? What things are good about each procedure? Which investigative method seems least likely to solve the problem?"

STUDENT 1: "Alternative 3 offers better controls over the variables involved."

STUDENT 2: "The simplicity of the second approach and its low cost makes it more appealing."

Originating ProblemsSituation

The teacher selects a topic familiar to the class and asks questions related to it. The students have sufficient background to formulate problems.

Dialogue

TEACHER: "What influential factors should we consider if we were trying to bring the economy into better balance? (Other problems which could be discussed include conserving natural resources, eliminating diseases such as cancer, improving nutrition for the poor, and protecting the beauty of our land from pollution.)

STUDENT 1: "The gross national product and income per capita."

STUDENT 2: "Interest rates, stock market levels, and the number of new housing areas."

TEACHER: "Which of these do you think is the biggest problem?"

STUDENT 3: "Interest levels."

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